31/19/093

XL-V163TN/V164BK
XL-V263TN/V264BK

V00672

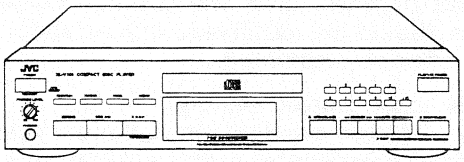
JVC

SERVICE MANUAL

COMPACT DISC PLAYER

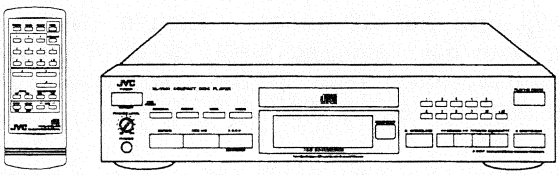
XL-V163TN/V164BK
XL-V263TN/V264BK

COMPACT disc DIGITAL AUDIO



COMPU LINK Component

(XL-V163TN/XL-V164BK)



COMPU LINK Remote Control Component

(XL-V263TN/XL-V264BK)

Note : * XL-V163TN/XL-V164BK and XL-V263TN/XL-V264BK are completely same in their structure, except for the remote controller.

* XL-V163TN and XL-V164BK are completely same in their structure, except for their outlook colours, also XL-V263TN and XL-V264BK.

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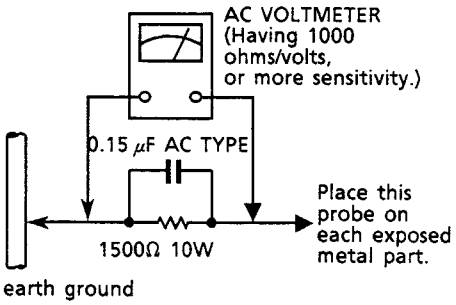
No. 20392
Mar. 1993

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. CAUTION : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

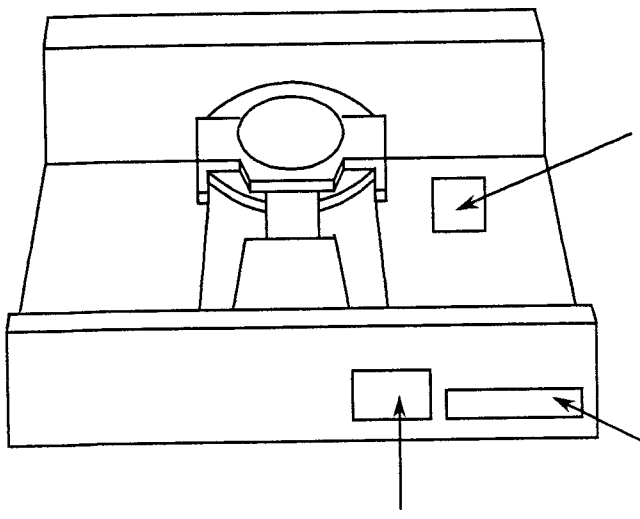
VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS



WARNING LABEL
(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

CLASS 1
LASER PRODUCT

CLASSIFICATION LABEL
(Except for the U. S. A. and Canada)

CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE .

CERTIFICATION PRINT BY DHHS
(Only for the U.S.A.)

IMPORTANT for the U.K.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nontheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.
If this product is not supplied fitted with a mains plug then follow the instructions given below:
IMPORTANT.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

THIS UNIT IS PRODUCED TO COMPLY WITH DIRECTIVE 76/889/EEC.

CAUTION

To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

IMPORTANT FOR LASER PRODUCTS

REPRODUCTION OF LABELS

① CLASSIFICATION LABEL, PLACED ON REAR ENCLOSURE
(Except for the U.S.A.)

CLASS 1
LASER PRODUCT

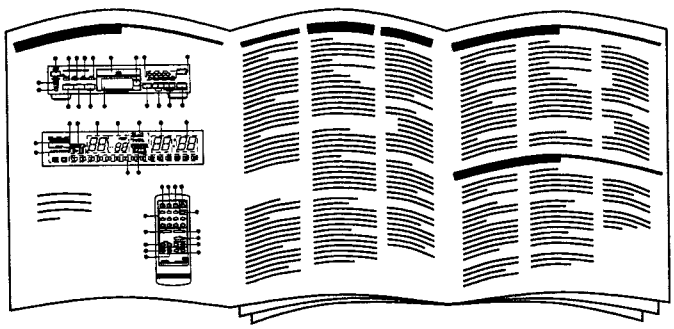
② WARNING LABEL, PLACED INSIDE THE UNIT
(Except for the U.S.A.)

DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	**VARNING:** Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling (d)	**VARO:** Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

E406507-001

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.

On the back fold-out page of this page are illustrations of the front panel, the display and the remote control unit.
Please see reverse side of this fold-out page when you read the instructions corresponding by number.



FRONT PANEL

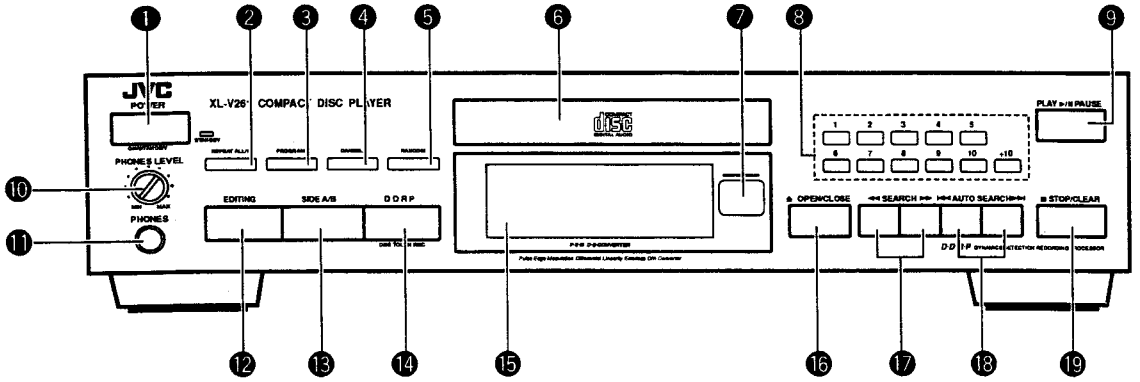


FIG. 1

DISPLAY

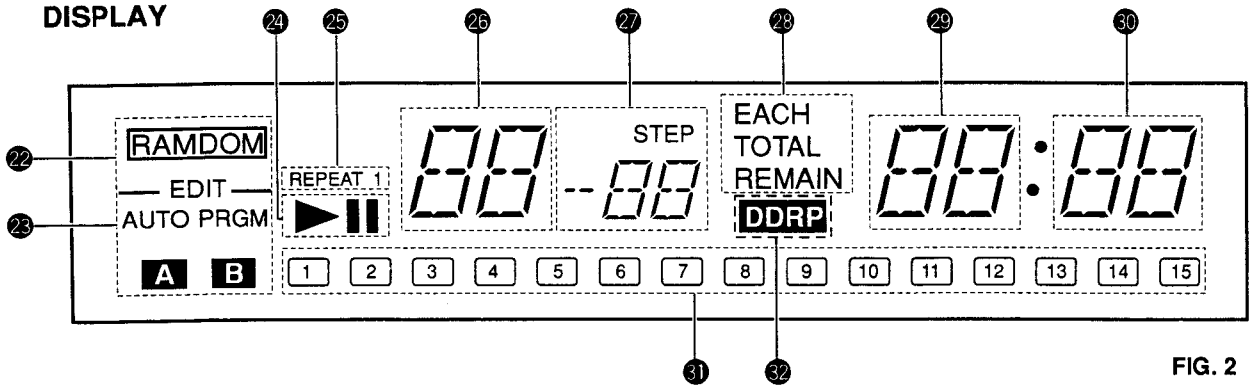


FIG. 2

REMOTE CONTROL UNIT

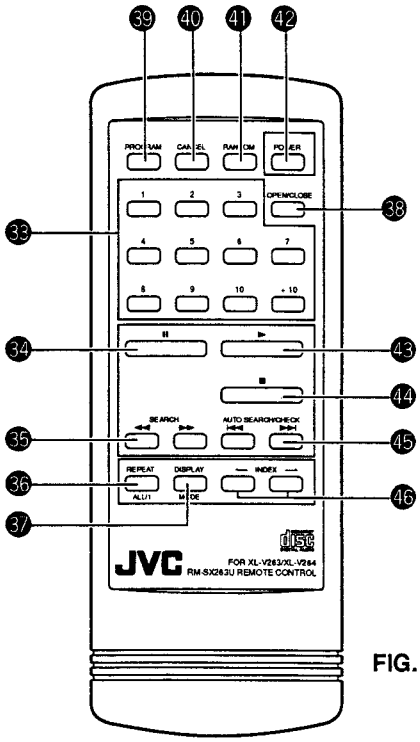


FIG. 3

ENGLISH

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Thank you for purchasing this JVC product. Before you begin operating this unit, please read the instructions carefully to be sure you get the best possible performance.
If you have any question, consult your JVC dealer.

COMPU LINK Control System

XL-V163TN, XL-V164BK

COMPU LINK //// Remote //// Control System

XL-V263TN, XL-V264BK

COMPU LINK (remote) Control System is a convenient system using COMPU LINK-1, 3/SYNCHRO terminals on the rear panel.
For further details, refer to page 2.

D·D·R·P

DYNAMICS DETECTION RECORDING PROCESSOR

This product can be combined with a DDRP (Dynamic Detection Recording Processor) system (compact disc player + cassette deck, etc.) to enable setting the optimum recording level automatically.
For further details, refer to page 2.

Notes:

- **XL-V163TN/XL-V164BK/XL-V263TN/XL-V264BK has almost the same function. Their differences are as follows:**

Model Name	Color	Remote Control
XL-V163TN	Titanium	No
XL-V164BK	Black	No
XL-V263TN	Titanium	Yes
XL-V264BK	Black	Yes

PRECAUTION IN USE

Installation

- Select a location which is level, dry and **Neither too cold nor too hot (between 5°C (41°F) and 35°C(95°F).**
- Avoid a dusty location or a location subject to vibrations.

Power

- When unplugging from the wall outlet, always pull on the plug, not on the power cord.

Malfunctions, etc.

- Do not insert any metallic object into the player.
- The discs to be played on this player are limited to those bearing the mark below (Fig. 4).
- Placing anything other than a compact disc on the tray may cause the player to malfunction.
- If something goes wrong, turn the power off immediately. If the same phenomenon occurs when the power is turned on again, turn the power off and consult your JVC dealer.

Volume setting

As a compact disc causes almost no noise, it is difficult to set the volume level by listening to noise as in the case of an ordinary analog turntable or a tape deck. If the volume level is raised too much because the beginning of the selection is quiet, the speakers may be damaged by a sudden increase in the sound level.

Condensation

As the compact disc player uses optical parts, moving it from a cold to warm place or using it in a room subject to excessive humidity or in a room where a fire has just been lit may cause condensation on the optical parts. This phenomenon may prevent the light from being correctly transmitted, and may cause noise or malfunction.
If dew condenses and the player does not function correctly, leave it on for several hours with the power turned on.
If the player does not function even after such period, consult your dealer.

Note:

- **When this unit is placed near a tuner or a receiver, noise may occur. If this happens, move this unit as far from the tuner or the receiver as possible, or briefly turn off the power of the unit.**

COMPACT disc DIGITAL AUDIO

Fig 4

HOW TO HANDLE A COMPACT DISC

Since compact discs are made of plastic, they can be easily damaged; if the disc gets dirty, dusty, damaged or warped, the sound will not be picked up correctly, and such discs may cause the player to malfunction. When handling compact disc,use the following precautions.

- Do not touch the surface of the disc (reflective silver i.e. the side without the label) When handling the discs.
- **Storage**
  Make sure to keep discs in their cases. If discs are piled on top of the one another without cases, they can be damaged. Do not put discs in a location exposed to direct sunlight or in a place with high temperature and humidity.
  Avoid leaving discs in your car.
- **Maintenance of discs (Fig. 5)**
  When fingerprints and dirt adhere to a disc, wipe the disc off with a soft, dry cloth from the inside towards the outside. If it is dificult to clean, wipe the dics with a cloth moistened with water.
- Do not use record cleaners, benzine, alcohol or antistatic agent.
- Do not damage the label side or stick paper or adhesive to the surface.
- In the case of an 8 cm (3") single CD, place it in the disc hold, for an 8 cm (3") disc, within the tray.

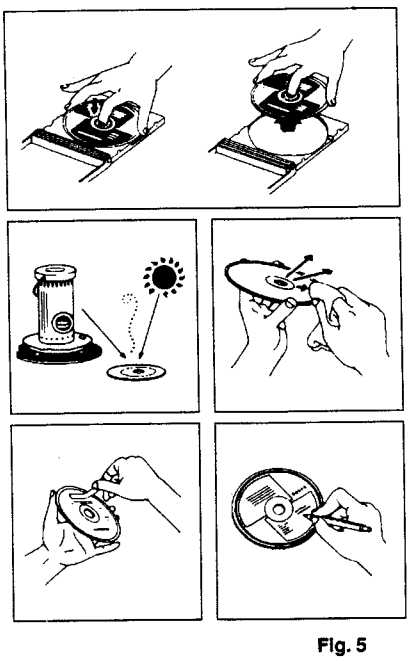

Fig. 5

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ENGLISH

COMPU LINK CONTROL SYSTEM

The Compu Link Remote Control System controls relative operations between components automatically and facilitates various operations. This is a system originated and developed by JVC for facilitating various system operations. There are two versions of this system; version 1 and 3. (For version 1 components, "COMPU LINK-1 SYNCHRO" is marked on the rear panel. For version 3 components, "COMPU LINK-3 SYNCHRO" is marked on the rear panel. This unit belongs to version 3.) The version 3 system control relative functions between this unit and an amplifier or receiver, in addition to all of the functions of version 1.

Automatic Source Selection
When the provided remote cable are used for connecting this unit to other components which have COMPU LINK-1, 3/SYNCHRO terminals, the switch-over of all system components is possible with simple one-touch of the source selector button of the JVC amplifier or receiver. By doing this, the corresponding component will start playing automatically. The source select button of the remote control unit or the select button of the desired component can also be use for this purpose.
When the components have been switch over, the previously used component will stop playing within five seconds.

Synchronized Recording
If a cassette deck with COMPU LINK-1, 3/SYNCHRO terminals is connected with the remote cable supplied, synchro recording becomes possible.
Synchronized recording refers to the process in which the cassette deck starts recording in the synchronism with the CD player. Perform the synchronized recording as follows.
1. Set the cassette deck to the REC/PAUSE mode in accordance with the procedures in the instructions.
2. If you want programmed recordings, program the desired selections in any order you wish to hear them.
3. Press the [PLAY▶/II PAUSE] button of the CD player. By doing so, the cassette deck is placed in the record mode and synchronized with the CD player for recording. Synchronized recording thus can be made possible.

Automatic Source Selection
This feature works only when this unit is connected to an amplifier or receiver with COMPU LINK-3 SYNCHRO terminals.
By pressing the [PLAY▶/II PAUSE] or (▶) button, you can turn on this unit and the connected equipment (amplifier or receiver), and by turning off the connected equipment, you can turn off this unit.

Notes:
- **Synchronized recording stops automatically when the CD player stops playing.**
- **To cancel synchronized recording, press the [■ STOP/CLEAR] button of the CD player or cassette deck.**

CAUTION:
- **When the REC/PAUSE mode is set by pressing [PAUSE (II)] button after pressing the [REC (○)] and [PLAY (▶)] buttons simultaneously, synchronized recording is not possible. For details, refer to the instructions of the cassette deck.**
- **Abnormal operation will result if the power supply of the component(s) is interrupted. If this happens, you must start all over again.**
- **Ensure that the COMPU LINK-1, 3/SYNCHRO terminals of the individual components are connected with the provided remote cables. Also be sure to fully read the instructions for each component.**

DDRP (Dynamics Detection Recording Processor)

The Dynamics Detection Recording Processor (DDRP) detects the peak level of the music being performed and outputs the optimum recording level.
When the (DDRP) button is pressed, the DDRP indicator starts to flash, the letters "ddrp" run along the display and the volume is reset to the maximum value. Each time a new peak level is detected during peak search mode, the PHONES OUTPUT LEVEL setting is reduced and the optimum level is set. The time taken for peak search varies with the total performance time of the music being scanned, but is around two minutes for a 40 minute performance time.

DDRP Recording
The combination of the DDRP function and synchro recording makes recording on tape cassette very easy. There are two recording methods - according to which type of cassette deck is being used.
1. In combination with a DDRP compatible JVC cassette deck :
   Peak search is initiated by pressing the [DDRP] button. As soon as the peak search is terminated, recording starts. The cassette deck should be operated in accordance with the instructions supplied with it.
2. In combination with any JVC cassette deck not DDRP-compatible :
   Where connection is made to a cassette deck not DDRP-compatible, via the synchro terminals, pressing the [DDRP] button will start the recording process.
   In this case, the cassette deck input level will not be automatically set.
   Where a none DDRP-compatible cassette deck is used, a preliminary recording should be made in order to ascertain ideal input levels - the input level being then set up in accordance with the instructions for the cassette deck. If the input-level knob is subsequently reset to the same position, this enables recording at the optimum level to be done, without resetting every time.

DDRP Cancel
Press the [▲ OPEN/CLOSE] button to cancel DDRP mode.

Note
- The graphic equalizer should not be used during DDRP recording. Using this facility will disturb the optimum recording level setting just found by the DDRP.
- Please do not turn off the power to the CD player while the DDRP mode is active. If this should be turned off by accident then the cassette deck should also be switched off for a few seconds in order to clear the DDRP recording mode from the cassette deck.
- When the cassette deck is connected via the synchro terminals, it is set in recording mode when DDRP is pressed. Take care, therefore, not to erase a tape by mistake.

Supplementary Notes
- *For successful DDRP recording, make sure to turn on the cassette deck before starting the recording.*
- *Whenever any addition or cancellation is made to the music tracks programme, the DDRP mode is cancelled.*
- *DDRP recording is automatically stopped when the CD player stops.*

ENGLISH

HOW TO INSTALL THE BATTERIES

The service life of the batteries depends on the condition of use; the standard life is about one year.
When the batteries becomes weak, the effective distance of the remote control unit will become shorter. If this happens, replace the batteries with new ones.

- **How to install batteries**

1. Remove the rear cover of the remote control unit by pressing down on it with your thumb and simultaneously pulling it backwards, as shown in Fig. 7.

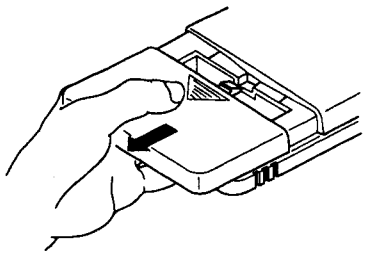


Fig. 7

2. Install batteries (AAA, R03, UM-4) as shown in Fig. 8.
   Be sure batteries are installed with correct polarity, (+) and (–).

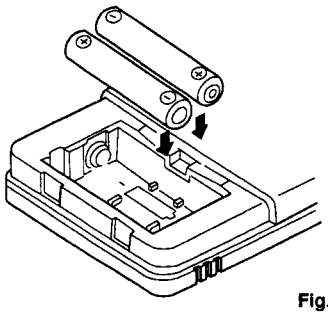


Fig. 8

3. Reinstall the rear cover of the remote control unit. Slide the rear cover back as shown in Fig.9.

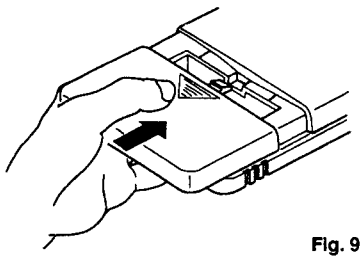


Fig. 9

Notes:

- **The lower the temperature, the shorter battery life.**
- **Battery replacement.**

- **Batteries**

Incorrect use of batteries can cause corrosion or damage. Note the following points to lenghten battery life.

1. Install batteries observing the correct polarity, (+) and (–).
2. Do not use new and old batteries simultaneously.
3. Batteries with similar shapes may have different voltage ratings. Be sure to use the correct batteries.
4. Remove batteries from the remote control unit if it will not be used for a long period of time.

(No.20392)1-9

CONNECTION DIAGRAM

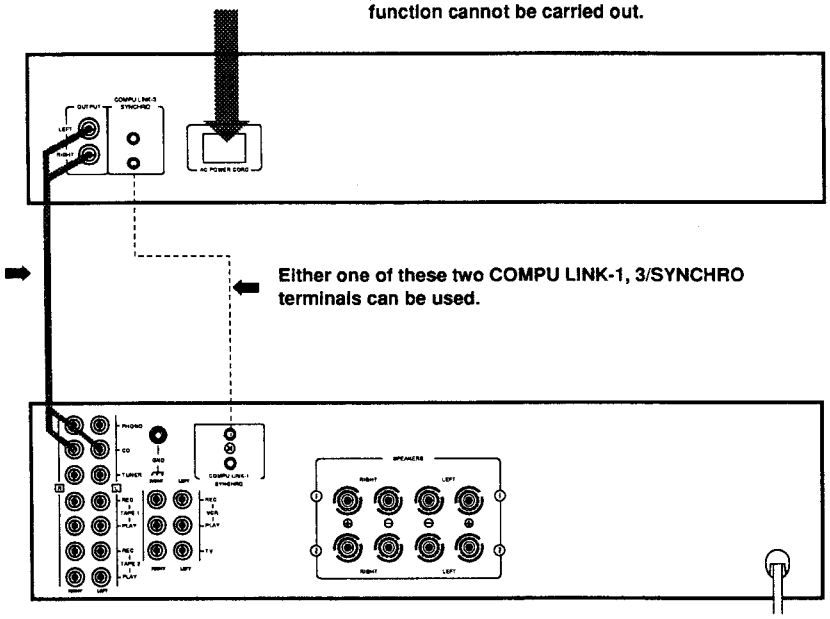
ENGLISH

- Do not connect the power plug unless all the connection is completed.
- Connect the audio plug firmly.
- The synchronized recording is only possible with JVC products which have the COMPU LINK-1, 3/SYNCHRO terminals. To carry out synchronized recording, connect to the amplifier's CD terminal. For further details, consult your JVC dealer.
- The AC power cord is supplied and must be connected to the unit before use.

Connecting to the Analog Output Terminals

When using the Compu Link Remote Control System version 3, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver. Otherwise, the automatic power on/off function cannot be carried out.

AC POWER CORD



This cord is designed to connect the CD or AUX terminals. Do not connect this cord to the PHONO terminals of the amplifier.

Either one of these two COMPU LINK-1, 3/SYNCHRO terminals can be used.

An example of an amplifier

Fig. 10

DESCRIPTION AND FUNCTIONS

ENGLISH

❶ POWER (ON/STANDBY) switch and STANDBY indicator
Press this switch to turn the power on. Press again to turn the power off and activate the standby mode.
A small amount of power (3 watts) is consumed and the STANDBY indicator is lit in the standby mode. To turn the power off completely, disconnect the power cord from the wall outlet.

❷ REPEAT ALL/1
Press this button to play one selection, all the selections or the programmed selections of the disc repeatedly.
When desiring all the selections, press the button once. "REPEAT" will be lit in the display window. When desiring one selection, press the button once again. "REPEAT 1" will be lit in the display window. To release this repeat play, press the [REPEAT ALL/1] button again.

❸ PROGRAM
To program the sequence of the selections to be played, press this button while the CD player is in the STOP mode. The PROGRAM indicator lights and up to 32 selections can be programmed.

❹ CANCEL
Press this button to cancel a programmed tune, each time it is pressed, one tune is cancelled.

❺ RANDOM
When this button is pressed, the CD player will be ready for random play.

❻ Disc Tray
Load the disc to be played.

❼ REMOTE SENSOR
(for XL-V263TN/XL-V264BK only)

❽ 10 key operating buttons
To designate the desired track numbers or establish the time interval during the tape editing, use these buttons. If the desired number is 10 or less, use the [1] ~ [10] buttons. However, to assign a track number greater than 10, use the [+10] button and the [1] ~ [10] button.

Examples
- To assign the 25th track, press the [+ 10] button twice then press the [5] button.
- To assign the 30 minutes, press [+ 10] button twice then press the [10] button.

❾ PLAY ▶/II PAUSE
Press this button to start play. If the disc tray is out press this button, and disc tray will then move in and play will start (without pressing the [▲ OPEN/CLOSE button].
Press this button again to suspend play temporarily. The optical pickup stops and the disc continues to rotate. This status is called the pause mode.

Note:
- **If the button is pressed with no disc loaded, the disc tray will come out. If the button is pressed in the standby mode, the power will turn on and play will start.**

❿ PHONES LEVEL
Adjust the volume of the head phones.

Note:
- **When listening to music by the headphones, be careful not to abuse your ears by setting the volume too high. Adjust the volume properly to obtain ear-pleasing listening.**

⓫ PHONES
Insert the headphones into this jack.

⓬ EDITING
When editing the disc data in the cassette tape, the time interval can be established in advance in accordance with the tape length. When this button is pressed, "EDIT" appears in the display window.

⓭ SIDE A/B
Use this button to designate the tape side when programming for edit recording.

⓮ DDRP
Press this button for DDRP recording. If the player is connected to a DDRP system compatible cassette deck, when this button is pressed, the optimum recording level is automatically set and recording will start.

⓯ Display Window (MULTI MODE DISPLAY)
This shows the total number of selections on the disc, the total playing time, the elapsed playing time, the remaining playing time, various program data, etc.

⓰ ▲ OPEN/CLOSE
Press this button to move the disc tray in and out. Press once and the disc tray will move out; now you can load a disc. Press again to move the tray back in. The disc is now ready to be played.
If it is pressed during play, play will be interrupted. And the program will be erased from memory and the disc tray will come out.

Note:
- **If the power is turned off with the disc tray out, the disc tray will automatically come in.**
  The disc tray can be moved in and out even in the standby mode.

⓱ ◀◀ SEARCH
When this button is pressed during play or pause mode, the CD player will begin to scan backwards. In such a case, when the button is kept pressed, the CD player will backward-search slowly for about 3 seconds, and then go into a higher speed search.

▶▶ SEARCH
When this button is pressed during play or pause mode, the CD player will begin to scan forward. In such a case, when the button is kept pressed, the CD player will forward-search slowly for about 3 seconds and then go into a higher speed search.

⓲ ⏮ AUTO SEARCH
Press this button to locate the start of the current selection or to go back to the previous selection during play. Play will go back one selection each time the button is pushed. If the button is held down, play will continue to go back one selection at a time until the button is released.

▶▶⏭ AUTO SEARCH
Press this button to go to the start of the next selection. Every time this button is pressed, the pickup goes forward by one selection. Holding the button down moves the pickup forward continuously.

⓳ ■ STOP/CLEAR
Press this button to stop play. A few seconds after the disc has stopped rotating, the player goes into the STOP mode with the track number "1" shown in the display window. The player is then ready to play.

(No.20392)1-11

ENGLISH

DISPLAY

RANDOM
Lights in RANDOM MODE.

EDIT
Lights during editing recording.
[EDIT AUTO] : Lights during Auto Edit Recording.
[EDIT PRGM] : Lights during Program Edit Recording.
A : Lights when the A side of the tape is designated.
B : Lights when the B side of the tape is designated.

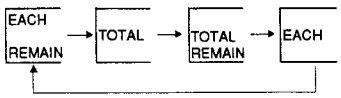
PLAY/PAUSE Indicators
► : Lights during play.
II : Lights in the pause mode.

REPEAT
Lights when the repeat play is ready.
REPEAT : Lights when the repeat play of all the selections is entered.
REPEAT 1 : Lights when the repeat play of only one selection is entered.

TRACK
Lights when all the selections of the disc are shown.
Shows the programmed selection numbers or the current selection number of the disc during programmed play.

STEP
Shows the numbers of memory steps of the programmed selections.

TOTAL/EACH/REMAIN
Each time the [DISPLAY MODE] button on the remote control unit is pressed, the indication changes in the following order.



EACH : Shows elapsed time for the each selection.
EACH REMAIN : Shows the remaining playing time of each selection. (Up to 31st selection can be displayed.)
TOTAL : Shows the elapsed playing time of the disc or the programmed selections.
TOTAL REMAIN : Shows the remaining playing time of the disc or the programmed selections. (Up to 31st selection can be displayed.)

Time Indicator (MINUTE)
Shows the total playing time, elapsed playing time, or the remaining playing time in minutes.

Time Indicator (SECOND)
Shows the total playing time, elapsed playing time, or the remaining playing time in seconds.

Program Chart
This chart indicates the number of each selection on the disc.
When a selection is programmed, the selection number lights.

DDRP INDICATORS
DDRP : Blinks during DDRP operation and lights steadily during DDRP recording.

REMOTE CONTROL UNIT

The remote control range is approximately 7 metres (23 ft.)
Pointing the remote control on an angle to the receiver, will reduce the useful distance of the remote control.
Use gentle but firm pressure when pressing the remote control buttons.

If you cannot do remote control, when the disc tray is slided out, the REMOTE SENSOR might be blocked by the disc tray. So operate as below.

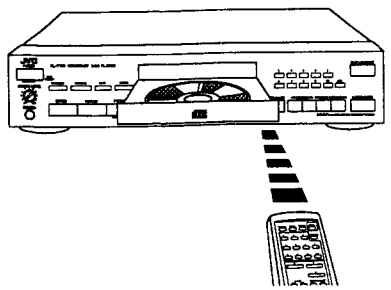


Fig. 13

Notes:
- **The provided remote control unit (RM-SX261U) has operating buttons which are basically identical with those of the CD player. The differences are the following button which are not on the CD player.**
- **Stop (■) button on the remote control unit cannot cancel the programmmed selections.**

10 key operating buttons
To designate the desired track numbers or establish the time interval during the tape editing, use these buttons. If the desired number is 10 or less, use the [1]~[10] buttons. However, to assign a track number greater than 10, use the [+10] button and the [1]~[10] buttons.

Example
- To assign the 25th track, press the [+10] button twice then press the [5] button.

Pause (II)
Press to stop play temporarily.

Note:
- **To continue playing, press the Play (►) button again.**

SEARCH (◄◄ SEARCH ►►)
◄◄ : Scans backward quickly during play.
►► : Scans forward quickly during play.

REPEAT ALL/1
Press this button to play one selection, all the selections or the programmed selections of the disc repeatedly.

DISPLAY MODE
This button changes the time data in the display window.

OPEN/CLOSE
Press to move the disc tray in and out.

PROGRAM
To program the sequence of the selections to be played, press this button while the CD player is in the STOP mode. The PROGRAM indicator lights and up to 32 selections can be programmed.

CANCEL
Press this button to cancel the programmed tune. Each time it is pressed, one tune is cancelled.

RANDOM
When this button is pressed, the CD player will be ready for random play.

POWER
Press this button to turn on the power of this set.

Play (►)
Press to start play.

Stop/Clear (■)
Press to stop play. However, this does not clear the program or the program edit recording.

AUTO SEARCH/CHECK (|◄◄,►►|)
|◄◄ : Skips to the beginning of the previous track.
►►| : Skips to the beginning of the next track.
It can be also used to check the program order, or to cancel part of the program.

INDEX
(—): To start play from the desired index point, scan backward to the desired index point with this button.
(—): To start play from the desired index point, scan forward to the desired point with this button.

HOW TO OPERATE

[ ] : The button on the main unit.
( ) : The button on the remote control.

ENGLISH

Preliminary Operation

1. Turn on and adjust components such as an amplifier.
2. Turn on the CD player.
3. Press the [▲(OPEN/CLOSE)] button to slide the disc tray out.
4. With its label side up, load a disc on the disc tray.
5. Press the [▲(OPEN/CLOSE)] button again to slide the disc tray in.

Notes:

- **The display shows the number of tracks and total playing time of the disc for 3 seconds.**
- **You can also close the disc tray by pressing the [PLAY►/II PAUSE] or (►) button. In such a case, play starts immediately with the first selection of the disc.**

To Play From the First Selection

Press the [PLAY►/II PAUSE] or (II) button.

To Play From Any Desired Selection

1. Designate the desired selection number by the 10 key operating buttons.

Examples:

- To assign the 25th track, press the [+10] button twice and then press the [5] button.
- To assign the 30th track, press the [+10] button twice and then press the [10] button.

The same operation can also be carried out using [(I◄◄,►►I)] button.

1. Designate the desired selection number by the ([►►I]) button.
2. Press the [PLAY►/II PAUSE] or (►) button.

To Stop Play Temporarily

Press the [PLAY►/II PAUSE] or (II) button.

Note:

- **To continue playing, press the [PLAY►/II PAUSE] or (►) button again.**

To Switch Selections During Play

- **To skip to the next selection**
  Press the [(►►I)] button.
- **To skip to the previous selection**

1. Press the [(I◄◄)] button once and locate the start of the current selection.
2. Immediately after step 1, press the [(I◄◄)] button again.

To Repeat Play

- **To repeat all the selections**

1. Press the [(REPEAT ALL/1)] button once.
2. Press the [PLAY►/II PAUSE] or (►) button.

- **To repeat one selection**

1. Press the [(REPEAT ALL/1)] button twice.
2. Designate the desired selection number by the [(►►I)] button.
3. Press the [PLAY►/II PAUSE] or (►) button.

To Stop Play

Press the [■STOP/CLEAR] or (■) button.

To Remove the Disc

Press the [OPEN/CLOSE (▲)] button.

To Program Play

1. Press the [■STOP/CLEAR] or (■) button.
2. Press the [PROGRAM] button.
3. Program any desired selections with the 10 key operating buttons.
4. Press the [PLAY►/II PAUSE] or (►) button.

To Correct the Program

- **To correct all the program**

1. Press the [■STOP/CLEAR] or (■) button.
2. Start programming again from the beginning.

- To correct each content of the program during programming

1. Press the [(I◄◄)] button to go back to the program which needs to be cancelled.
2. Press the [(CANCEL)] button.
3. Program a desired selection with the 10 key operating buttons.
   * Newly programmed selection is added to the last of the program.

To Check the Program

Press the [(I◄◄ ,►►I)] button.

Notes:

- **A maximum of 32 out of 99 tunes can be selected.**
- **When the programmed play is performed, the selection number programmed first and the total playing time of programmed selections are displayed.**
- **The total playing time display is useful when making recording from the CD player.**
- **When programming is carried out with the disc tray out, the total playing time of the programmed selections will not be displayed.**
- **When the total playing time of all the selected tunes exceeds 99 minutes and 59 seconds, the time display will be disabled and only the center bar will be displayed.**
- **Pressing the [(►►I)] button when in the programmed play causes the unit to skip to the next programmed selection.**
- **To stop temporarily during programmed play, press the [PLAY►/II PAUSE] or (II) button. Press this button again to restart.**

To Random Play

1. Press the [■STOP/CLEAR] or (■) button.
2. Press the [(RANDOM)] button.
3. Press the [PLAY►/II PAUSE] or (►) button.

To Cancel the part of Random Play

1. Select the track(s) you want to cancel with the 10 key operating buttons.

To add cancelled track(s) to Random Play

1. Select the cancelled track(s) you want to add to Random Play with the 10 key operating buttons or [(I◄◄,►►I)] button.
2. Press the [(PROGRAM)] button.

To Perform Synchronized Recording

Synchronized recording is possible by connecting the cassette deck to the COMPU LINK-1, 3/SYNCHRO terminals of the CD player through the remote cable.

1. Press the [REC (○)] and [PAUSE (II)] buttons of the cassette deck.
2. Press the [PLAY►/II PAUSE] or (►) button of the CD player to start the synchronized recording.
3. Press the [STOP/CLEAR (■)] or (■) button to stop recording.

To record using DDRP

Whenever the remote cable supplied is connected to the COMPU LINK-1, 3/SYNCHRO terminals housed in a DDRP-compatible cassette deck (with its power on), DDRP recording mode is available.
By pressing the [DDRP] button, recording is automatically started as soon as the peak level search routine is completed.

To Perform Edit Recording

- **Auto Edit Recording**
  Automatically distributes and edits the tracks accommodated within the specified time to sides A and B.

1. Set a disc and press the [■STOP/CLEAR] or (■) button.
2. Press the [EDITING] button to light AUTO.
3. Set the recording time corresponding with the tape used, using the numerical key buttons.

Examples:

- To assign the 54 minutes, press [+10] button fifth then press the [4] button.
- To assign the 90 minutes, press [+10] button eight then press the [10] button.
  When the length of tape corresponds with the time displayed then the [SIDE A/B] button should be pressed.

4. Press the [DDRP] button.
   (When automatic setting of the recording level is not required, set the cassette deck to standby (REC PAUSE) and press the CD player [PLAY►/II PAUSE] or (►) button.)
   (When the synchro terminals are not connected, once the peak search is completed, set the cassette deck to record, and press the CD player [PLAY►/II PAUSE] or (►) button.)

   When the side A music programme has terminated, recording is automatically stopped.
   If side B is also to be recorded, turn the tape over and again press the [DDRP] button. (now recording will start immediately)

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ENGLISH

Program Edit Recording
Edits the tracks accommodated within the specified time in the desired track order.
1. Set a disc and press the [■STOP/CLEAR] or (■) button.
2. Press the [EDITING] button to light PRGM.
3. Set the recording time corresponding with the tape used, using the numerical key buttons.

Examples:
- To assign the 54 minutes, press [C + 10] button fifth then press the [C4] button.
- To assign the 60 minutes, press [+ 10] button fifth then press the [(10)] button.

When the length of tape corresponds with the time displayed then the [SIDE A/B] button should be pressed.

4. Select the tracks to be recorded on side A, using the numerical key buttons.
5. Press the [SIDE A/B] button.
6. Select the tracks to be recorded on side B, using the numerical key buttons.
7. Press the [DDRP] button.
(When automatic setting of the recording level is not required, set the cassette deck to standby (REC PAUSE) and press the CD player [PLAY ►/II PAUSE] or (►) button.

When the synchro terminals are not connected, once the peak search is completed, set the cassette deck to record, and press the CD player [PLAY ►/II PAUSE] or (►) button.)

When the side A music programme has terminated, recording is automatically stopped.
If side B is also to be recorded, turn the tape over and again press the [DDRP] button (now recording will start immediately).

Connecting to a cassette deck not DDRP-compatible, via the synchro terminals
Where connection is made to a cassette deck not DDRP compatible, via the synchro terminals, the recording process will be started by pressing the [DDRP] button.
In this case, the cassette deck input level will not be automatically set.
A preliminary recording should be made in order to ascertain input levels - the input level being then set up in accordance with the cassette deck instruction manual. Subsequently setting the input-level knob to the same position enables recording at the optimum level without a resetting process every time.

TROUBLESHOOTING

What appears to be a malfunction may not always be serious.
Make sure first.

Although the disc is inserted in the CD player, DISPLAY shows no data.
Is the disc placed upside down?
– Place the disc on the disc tray with its label side up.

Selections cannot be programmed.
Is the "PROGRAM" indicator lit?
– Press the [PROGRAM] button.

The remote control unit does not function.
Are the batteries fresh?
– Replace the batteries with new ones.

The sound is intermittent and is harsh to the ear.
Is the disc dirty?
– Wipe off the surface with a soft cloth.
Is the disc scratched?
– Replace the disc with a new one.
Is the disc warped?
– Replace the disc with a new one.

SPECIFICATION

System	: Compact disc player
Signal detection system	: Non-contact optical system
Number of channels	: 2 channels
Frequency response	: 2 Hz ~ 20,000 Hz
Dynamic range	: 98 dB (1 kHz)
Signal/noise ratio	: 106 dB (at digital 0)
Channel separation	: 94 dB (1 kHz)
Harmonic distortion	: 0.0025 % (1 kHz)
Wow and flutter	: Less than measurable limit
Output level	: 2.0 Vrms (full scale)
Number of program steps	: 32 steps
Dimensions	: 435 (W) x 102 (H) x 273.5 (D) mm (17-3/16" x 4-1/16" x 10-3/4")
Weight	: 3.5 kg (7.8 lbs)

Accessories	: Signal cord (1 m • 3.28 ft.) 1
	: Remote cable (1 m • 3.28 ft.) 1
For XL-V263TN/XL-V264BK	
	: Remote control unit (RM-SX261U) 1
	: Battery (AAA, R03, UM-4) ... 2

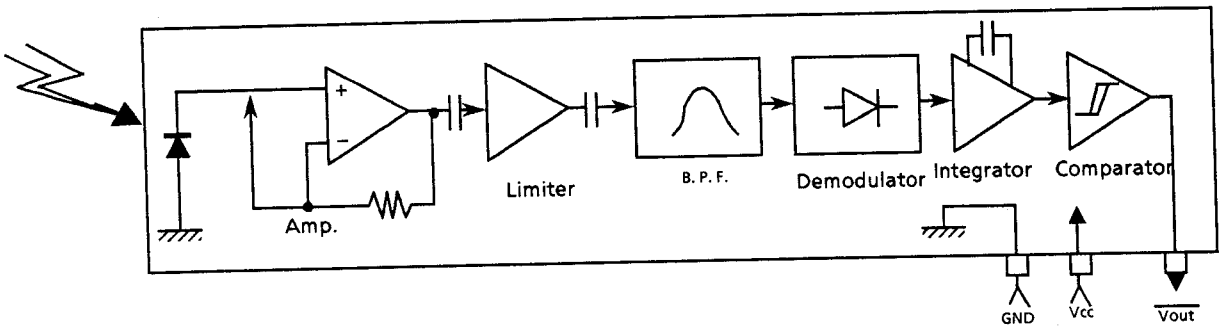
Design and specifications subject to change without notice.

POWER SPECIFICATIONS

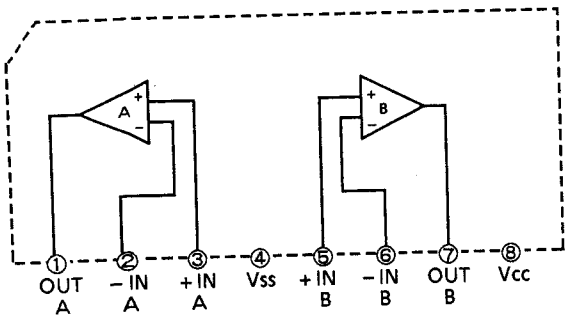
Line Voltage & Frequency	Power Consumption
AC240V ~, 50Hz	11 Watts

Description of ICs

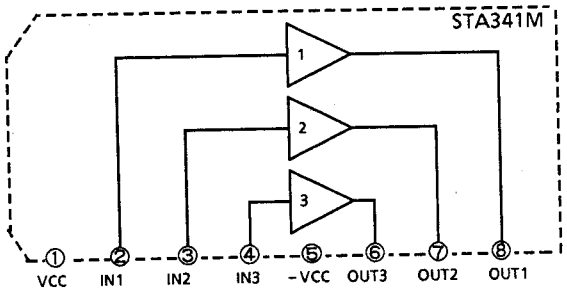
■ SPS420-1 (IC203) : Receiver for remote controller (not use for XL-V163TN/XL-V164BK)



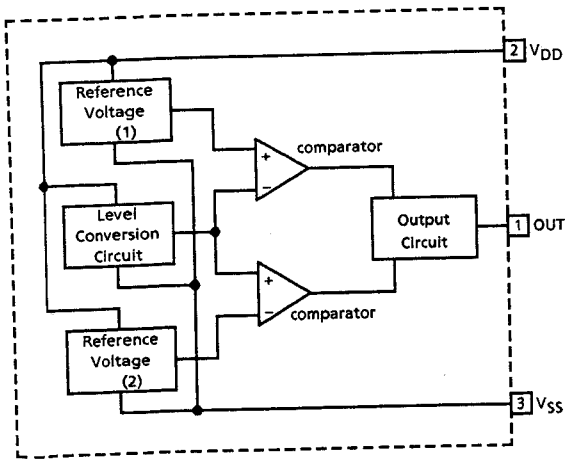
■ NJM4580L IC303, IC304, IC307,IC603 : Dual OP Amp.



■ STA341M (IC602) : Motor Driver



■ MN1281(IC202) : Reset IC



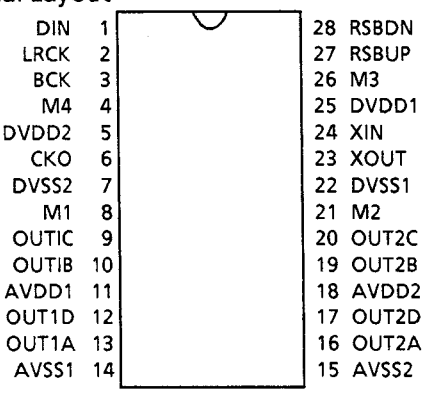
Pin No.	Pin Name	Functions
1	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.
2	V_{DD}	Power supply
3	V_{SS}	Ground

■MN35500(IC301) : D / A Converter

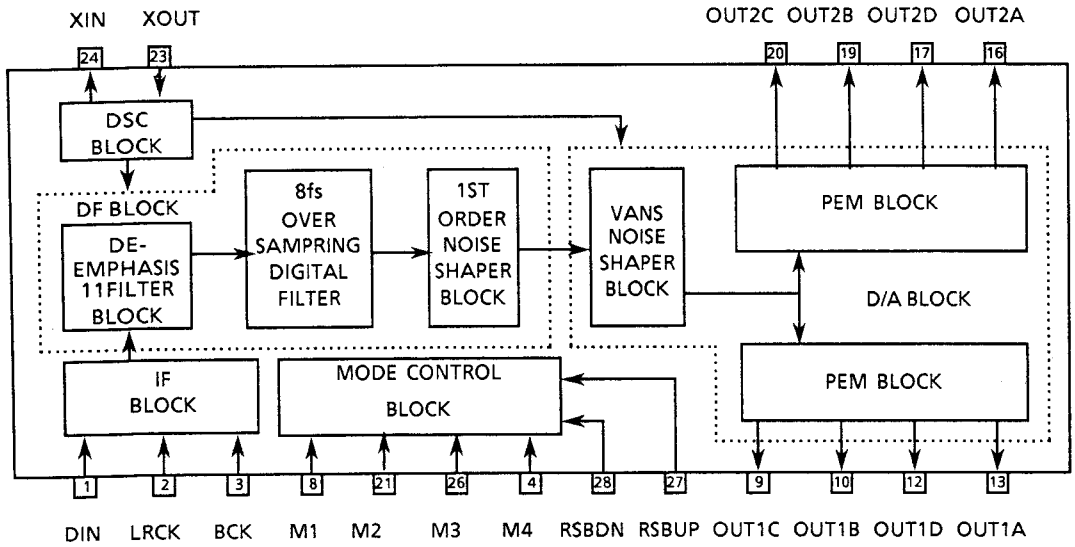
1. Outline

The MN35500 is a CMOS digital-analog converter with independent left and right channels. It was developed for PCM digital audio equipment. It features pulse edge modulation (PEM) and Victor advanced noise shaping (VANS) for resolution equipment to 20 bits(0-20kHz) and a low distortion ratio. At JVC, this type of digital-analog converter is called a DD converter.

2. Terminal Layout



3. Block Diagram



4.Pin Function Description

Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	DIN	I	Sirial data input pin	15	AVSS2	--	Analog ground pin 2
2	LRCK	I	L,R Clock input pin	16	OUT2A	O	2A PEM output pin
3	BCK	I	Sirial data input(Bit clock) pin	17	OUT2D	O	2D PEM output pin
4	M4	I	Movement mode switching pin 4	18	AVDD2	--	Analog power supply pin 2
5	DVDD2	I	Digital power supply pin 2 (+5V)	19	OUT2B	--	2B PEM output pin
6	CKO	I	Clock output pin	20	OUT2C	O	2C PEM output pin
7	DVSS2	I	Digital ground pin 2	21	M2	O	Movement mode switching pin 2
8	M1	--	Movement mode switching pin 1	22	DVSS1	--	Digital ground pin 1
9	OUT1C	I	1C PEM output pin	23	XOUT	--	Crystal oscillator output pin
10	OUT1B	O	1B PEM output pin	24	XIN	O	Crystal oscillator input pin
11	AVDD1	--	Analog power supply pin 1 (+5V)	25	DVDD1	--	Digital power supply pin 1 (+5V)
12	OUT1D	--	1D PEM output pin	26	M3	O	Movement mode switching pin 3
13	OUT1A	--	1A PEM output pin	27	RSBUP	O	Reset pin/digital attenetsion contorol pin
14	AVSS1	O	Analog ground pin 1	28	RSBDN	--	Reset pin/digital attenetsion contorol pin

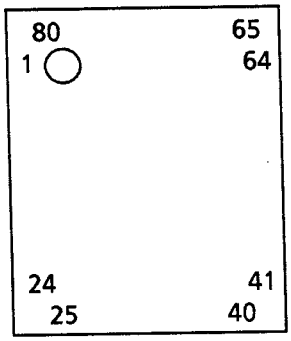
■ CXD2500BQ(IC401) : Digital Signal Processor

1. Outline

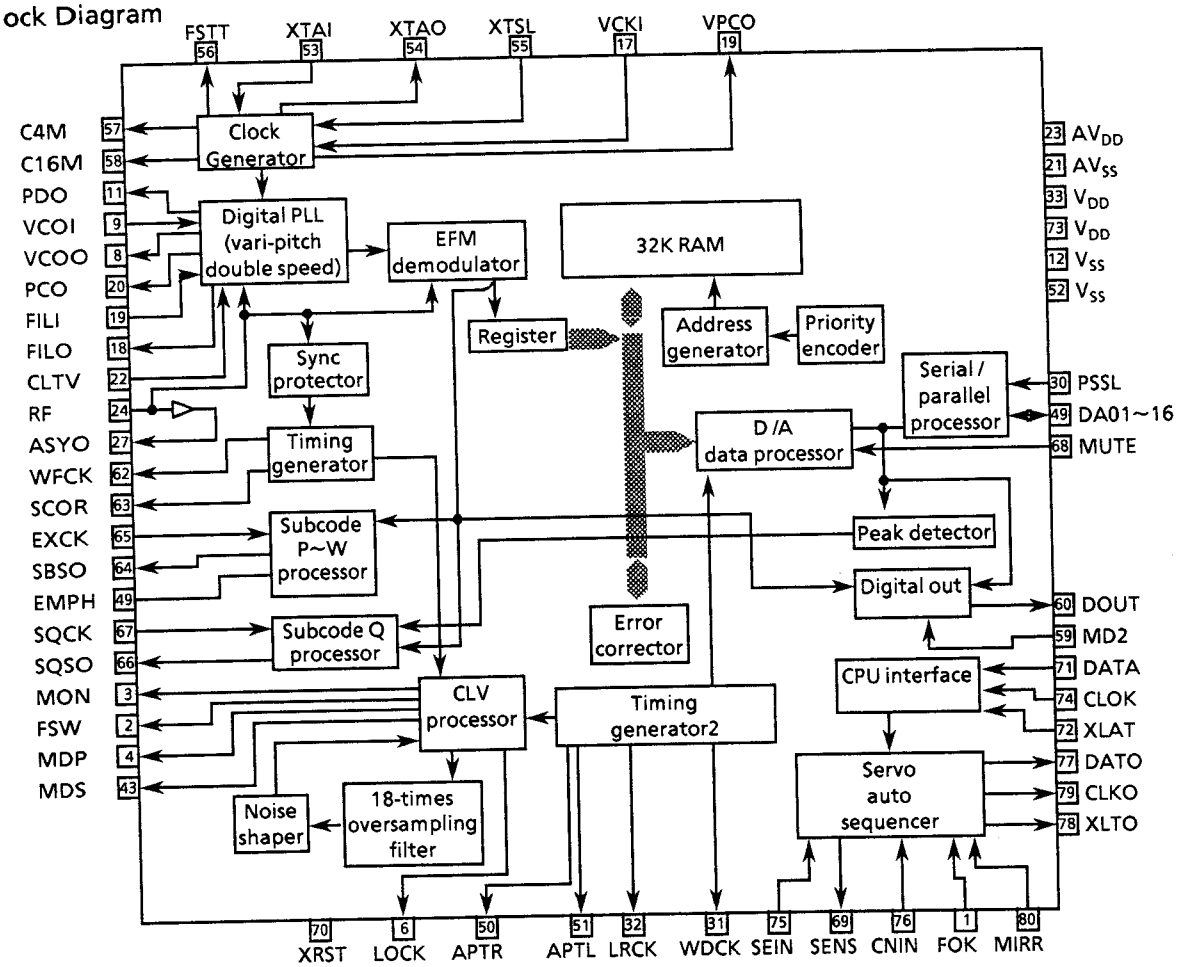
The CXD2500BQ is a digital signal processsing LSI designed for use in compact disc players. It has the following functions:

- All digital signals for regeneration are processed using one chip.
- The built-in RAM enables high-integration mounting.
- Generation by the use of a digital PLL of bit clock pulses for strobing the EFM signal.
- EFM data demodulation
- Subcode demodulation and subcode Q data error detection
- Digital spindle servo system (incorporating an oversampling filter)

2.Terminal Layout (TopView)



3.Block Diagram



Notes:

- The data at the 64-bit slot is output in 2's complements on an LSB-first basis. The data at the 48-bit slot is output in 2's complements on an MSB-first basis.
- GTOP monitors the state of Frame Sync protection. ("H" : Sync protection window released)
- XUGF is a negative Frame Sync pulse obtained from the EFM signal before Frame Sync protection is effected.
- XPLCK is an inversion of the EFM PLL clock. The PLL is designed so that the falling edge of XPLCK coincides with a change point of the EFM signal.
- The GFS signal turns "H" upon coincidence between Frame Sync and the timing of interpolation protection.
- RFCK is a signal generated at 136-μs periods using a crystal oscillator.
- C2PO is a signal to indicate a data error.
- XRAOF is a signal issued when a jitter margin of ± 28F is exceeded by the 32K RAM.

4. Pin Function Description

Pin No.	Symbol	I/O	Description
1	FOK	I	Focus OK input pin. Used for SENS output and servo auto sequencer.
2	FSW	O	Non connection
3	MON	O	Output for spindle motor ON / OFF control.
4	MDP	O	Output for spindle servo control.
5	MDS	O	Output for spindle servo control (Non connection).
6	LOCK	O	This terminal is "H" when the GFS signal sampled at 460Hz is "H". It turns "L" when the GFS signal turns out "L" 8 or more times in succession.
7~9	—	--	Non connection
10	TEST	I	Test pin (Normally at 0V)
11	PDO	O	Output of charge pump for analog EFM PLL (Non connection).
12	Vss	--	GND
13~16	—	--	Non connection
17	VCKI	I	Clock input from external VCO for vari-pitch control.fc = 16.9344MHz. Connected to GND.
18	FILO	O	Output of filter for masterPLL (Slave = Digital PLL)
19	FILI	I	Input to filter for master PLL.
20	PCO	O	Output of charge pump for master PLL.
21	AVss	--	Analog GND
22	CLTV	I	VCO control voltage input for master PLL.
23	AV_{DD}	--	Analog power supply
24	RF	I	EFM signal input
25	TEST2	I	TEST pin (Connected to GND)
26	TEST3	I	TEST pin (Connected to GND)
27	ASYO	O	EFM full-swing output
28	TEST4	I	TEST pin (Connected to GND)
29	NC	--	Non connection
30	PSSL	I	Input used to switch the audio data output mode."L" for serial output,"H" for parallel output.
31	WDCK	O	D / A interface for 48-bit slot. Word clock f = 2Fs.
32	LRCK	O	D / A interface for 48-bit slot. LR clock f = Fs.
33	V_{DD}	--	Power supply
34	DATA	O	Output DA16(MSB) when PSSL = 1 or serial data from 48-bit slot(2's completements,MSB first) when PSSL = 0.
35	BCLK	O	Output DA15 when PSSL = 1 or bit clock from 48-bit slot when PSSL = 0.
36~51	—	--	Non connection
52	VSS	--	GND
53	XTAI	I	Input of 16.9344MHz Xtal oscillation circuit or 33.8688MHz input.
54	XTAO	O	Output of 16.9344 MHz Xtal oscillation circuit.
55	XTSL	I	Xtal selection input pin. "L" for 16,344MHz Xtal, "H" for 33.8688 MHz Xtal.
56~58	—	--	Non connection
59	MD2	I	Digital-Out ON/OFF control. "H" for ON, "L" for OFF.
60	DOUT	O	Digital-Out output pin. Non connection
61,62	—	--	Non connection
63	SCOR	O	Turns "H" when subcode Sync S0 or S1 is detected.
64	SBSO	O	Serial output of Sub P ~ W.
65	EXCK	I	Clock input for reading SBSO.
66	SQSO	O	Outputs 80-bit Sub Q and 16-bit PCM peak-level data.
67	SQCK	I	Clock input for reading SQSO.
68	MUTE	I	"H" for muting, "L" for release.
69	SENS	O	SENS output to CPU.
70	XRST	I	System reset. "L" for resetting.
71	DATA	I	Inputs serial data from CPU.
72	XLAT	I	Latches serial data input from CPU at falling edge.
73	V_{DD}	--	Power supply(+ 5V)
74	CLOK	I	Inputs serial data transfer clock from CPU.
75	SEIN	I	Inputs SENSE from SSP(IC601). SSP : Servo Signal Processor
76	CNIN	I	Inputs track jump count signal.
77	DATO	O	Outputs serial data to SSP.
78	XLTO	O	Latches serial data output to SSP at falling edge.
79	CLKO	O	Outputs serial data transfer clock to SSP.
80	MIRR	I	Inputs mirror signal to be used by auto sequencer when jumping 128 or more tracks.

■ CXA1372S (IC601) : Servo Signal Processing Amplifier

1.Outline

The CXA1372S is a bipolar IC developed for RF signal processing (focus OK, mirror, defect detection, EFM comparator) and servo control.

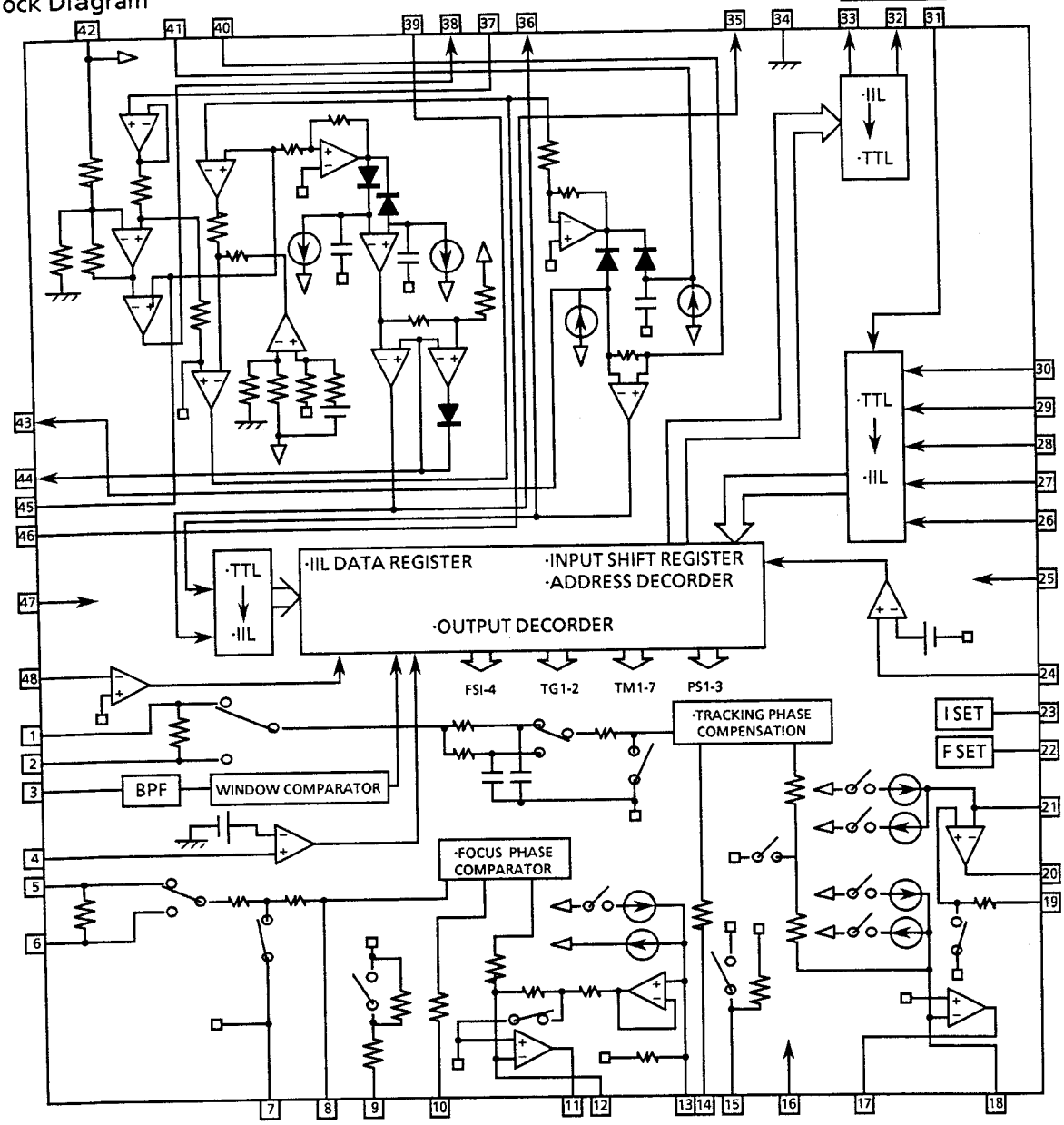
2.Functions

- Auto asymmetry control
- Focus OK detection circuit
- Mirror detection circuit
- Defects detection, counter measures circuit
- EFM comparator
- Focus servo control
- Tracking servo control
- Sled servo control

3.Terminal Layout

TE	1	48	TZC
TDFCT	2	47	DVEE
ATSC	3	46	RFO
FZC	4	45	RFI
FE	5	44	CP
FDFCT	6	43	CB
VC	7	42	DVCC
FGD	8	41	CC2
FS3	9	40	CC1
FLB	10	39	FOK
FEO	11	38	EFM
FE−	12	37	ASY
SRCH	13	36	DFCT
TGU	14	35	MIRR
TG2	15	34	DGND
AVCC	16	33	SENS
TAO	17	32	C.OUT
TA−	18	31	XRST
SL+	19	30	DATA
SLO	20	29	XLT
SL−	21	28	CLK
FSET	22	27	LOCK
ISET	23	26	DIRC
SSTOP	24	25	AVEE

4.Block Diagram

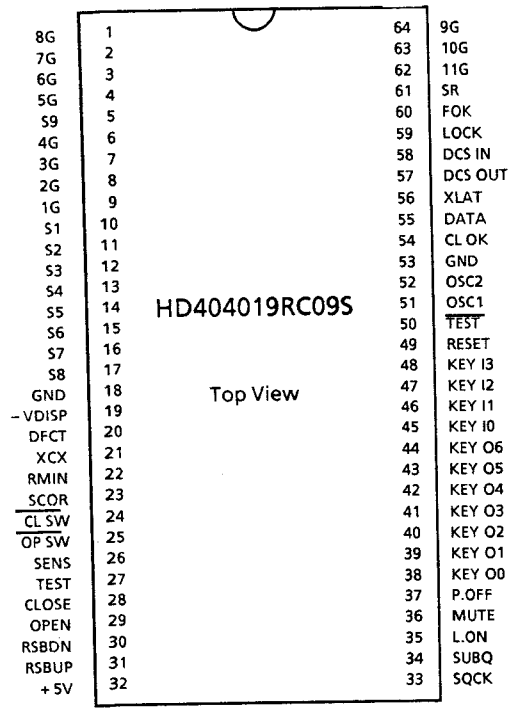


5.Pin Function Description

Pin No	Symbol	I/O	Description
1	TE	I	Input pin of tracking error amplifier.
2	TDFCT	I	Capacitor connecting pin for time constant during defects.
3	ATSC	I	Window comparator input pin for ATSC detection.
4	FZC	I	Pin for focus zero-cross comparator input.
5	FE	I	Input pin of focus error.
6	FDFCT	I	Capacitor connecting pin for time constant during defect functions.
7	VC	I	Center voltage input pin. For dual power: GND For single power supply: (VCC + GND)/2
8	FGD	I	Connect a capacitor between this pin and pin3 to reduce high-frequency gain.
9	FS3	I	The high-frequency gain of the focus servo is switched through FS3 ON and OFF.
10	FLB	I	Time constant external pin to raise the low bandwidth of the focus servo.
11	FEO	O	Focus drive output.
12	FE-	I	Inverse input for focus amplifier.
13	SRCH	I	Time constant external pin for formation of focus search waveform.
14	TGU	I	Time constant external pin for the selection of tracking high band gain.
15	TG2	I	Time constant external pin for the selection of tracking high band gain.
16	AVCC	--	Power supply
17	TAO	O	Tracking drive output.
18	TA-	I	Inverse input pin for tracking amplifier.
19	SL+	I	Non- inverse input pin for sled amplifier.
20	SLO	O	Sled drive output.
21	SL-	I	Inverse input pin for sled amplifier.
22	F SET	I	Pin to set peak frequency of focus tracking phase compensation and fo of CLV LPF.
23	I SET	I	Current is input to determine focus search, track jump, and sled kick height.
24	S STOP	I	Limit SW ON/OFF signal detection pin for disc inner periphery detection.
25	AVEE	--	- 5V
26	DIRC	I	Pin for one-track jump. Contains 47kΩpull-up resistor.
27	LOCK	I	At "L" sled runaway prevention circuit operate. Contains a 47kΩpull-up resistor.
28	CLK	I	Serial data transfer clock input from CPU.
29	XLT	I	Latch input from CPU.
30	DATA	I	Serial data input from CPU.
31	XRST	I	Reset input pin, reset at "L".
32	C.OUT	O	Track number count signal output.
33	SENS	O	Outputs FZC, AS, TZC and S STOP through command from CPU.
34	DGND	--	GND
35	MIRR	O	MIRR comparator output pin.
36	DFCT	O	Output pin of DEFECT comparator.
37	ASY	I	Input pin of auto asymmetry control.
38	EFM	O	Output pin of EFM comparator.
39	FOK	O	Output pin of FOK comparator.
40	CC1	I	Output pin of DEFECT bottom hold.
41	CC2	O	Input pin for the capacitance coupled output of DEFECT bottom hold.
42	DVCC	--	- 5V
43	CB	I	Connection pin of DEFECT bottom hold capacitor.
44	CP	I	Connecting pin of MIRR hold condenser. Non-inverted input pin of MIRR comparator.
45	RFI	I	Input pin with coupling capacitor where RF summing amplifier output is connected.
46	RFO	O	Output pin of RF summing amplifier and check point of eye pattern.
47	DVEE	--	- 5V
48	TZC	I	Input pin of tracking zero-cross comparator.

■ HD404019RC09S(IC201) : System controller

1.Terminal Layout



2.Key Matrix

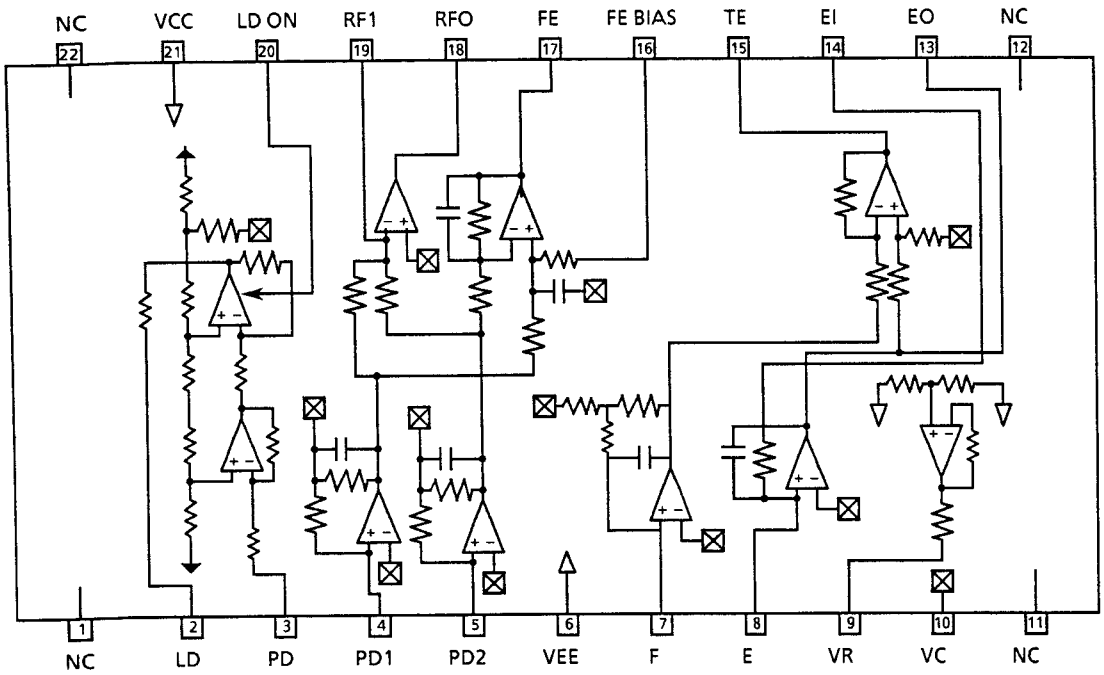
	KEY I 0 (PIN 45)	KEY I 1 (PIN 46)	KEY I 2 (PIN 47)	KEY I 3 (PIN 48)
KEY O0 (PIN 38)	◀◀	K1	K6	
KEY O1 (PIN 39)	▶▶	K2	K7	
KEY O2 (PIN 40)	⏮	K3	K8	▶II
KEY O3 (PIN 41)	⏭	K4	K9	K + 10
KEY O4 (PIN 42)	■	K5	K10	
KEY O5 (PIN 43)	DDRP	RANDOM	CANCEL	PROGRAM
KEY O6 (PIN 44)	EDIT	▲	REPEAT	SIDE A / B

3.Pin Description

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1~4	8G~5G	O	FL grid control output	34	SUBQ	I	Peak level data input
5	S9	O	FL segment control output	35	L.ON	O	Laser on signal output
6~9	4G~1G	O	FL grid control output	36	MUTE	O	Mute signal output
10 ~17	S1~S8	O	FL segment control output	37	POWER OFF	--	H:Power on L:Pwer off
18	GND	--	Ground	38 ~44	KEYO0 ~KEYO6	O	Key signal output
19	- VDISP	I	FL power supply	45 ~48	KEYI0 ~KEYI3	I	Key signal input
20	DFCT	O	Signal turns "H" during focus search	49	RESET	I	Reset signal input
21	XCX	O	Signal turns "H" when setting the tracking loop to "OFF"	50	TEST	I	Test mode input : connect yo + 5V
22	RMIN	I	Remote Control Signal Input Not use for XL-V161TN / V162BK	51	OSC 1	I	Clock oscillation input
23	scor	O	Signal turns "H" when detecting sub code syncro S0 or S1	52	OSC 2	O	Clock oscillation output
24	CLSW	I	Close switch : active "LOW"	53	GND	--	Ground
25	OPSW	I	Open switch : active "LOW"	54	CL OK	O	Clock signal output for serial data
26	SENS	I	Sens signal input	55	DATA	O	Serial data output to IC401
27	TEST	I	Test mode input	56	XLAT	O	Latch signal for serial data transfer to IC401
28	CLOSE	O	Close signal output	57	DCS OUT	O	Compu-link signal output
29	OPEN	O	Open signal output	58	DCS IN	I	Compu-link signal input
30	DFL	O	Digital filter latch signal output	59	LOCK	I	Lock signal input
31	RSBDN	O	Reset pin/digital attenetsion contorol pin	60	F OK	I	Focus OK signal input
32	RSBUP	O	Reset pin/digital attenetsion contorol pin	61	SR	--	Chip select : connect to ground
33	SQCK	O	Clock output for SUBQ	62 ~64	11G~9G	O	FL grid control output

■ CXA1571S(IC501) : RF AMP

1. Block Diagram



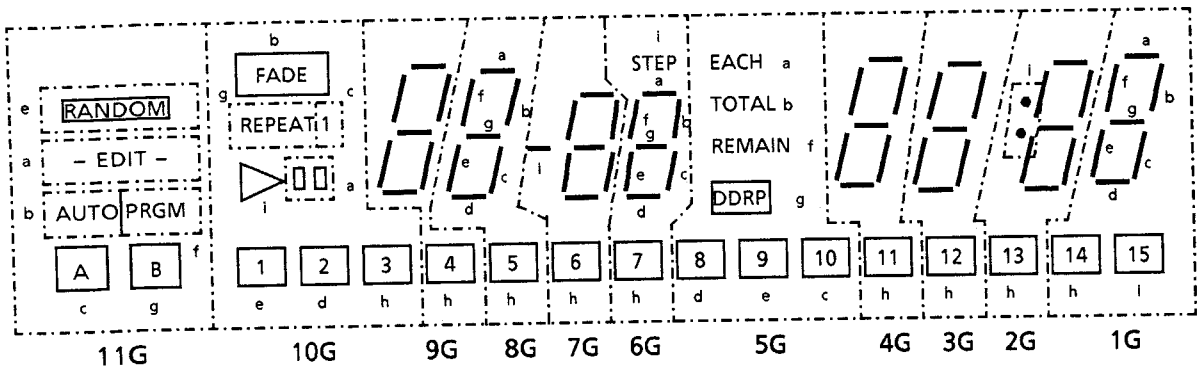
2. Pin Description

Pin No.	Symbol	I/O	Description
2	LD	O	APC(Automatic Power Control) amp output pin.
3	PD	I	APC amp input pin.
4 5	PD1 PD2	I I	RF I-V amp inverted input pins; they are connected to the A + C and B + D pins of the photodiode and receive current input.
7 8	F-IN E-IN	I I	F and E I-V amp inverted input pin; they are connected to Photodiodes F and E and receive current input.
9	VR	O	(VCC + VEE) / 2 DC voltage output pin.
10	VC	I	VC intermediate voltage input pin; when dual ±5V power supplies are used, this pin is connected to GND; for a single + 5V power supply, it is connected to the VR pin.
13	EO	O	Monitor output pin for I-V amp E.
14	EI	I	Gain adjustment pin for I-V amp E.
15	TE	O	Tracking error amp. output pin.
16	FE-BIAS	I	Bias adjustment pin for the mon-inverted side of the focus error amp.
17	FE	O	Focus error amp. output pin.
18	RF O	O	RF amp output pin.
19	RF I	I	RF inverted side input pin; the resister connected between this pin and the RFO pin determines the gain of theRF amp.
20	LD-ON	I	This pin switches the APC amp on / off: on for VCC, off for ground.

Internal Connections of FL Display Tube

■ ELU0001-114 (FL201)

1. Grid Layout



2. Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Electrode	F1	F1	NP	NC	11G	10G	9G	8G	7G	6G	5G	P (i)	4G	3G	2G	1G	P (a)	P (b)	P (f)

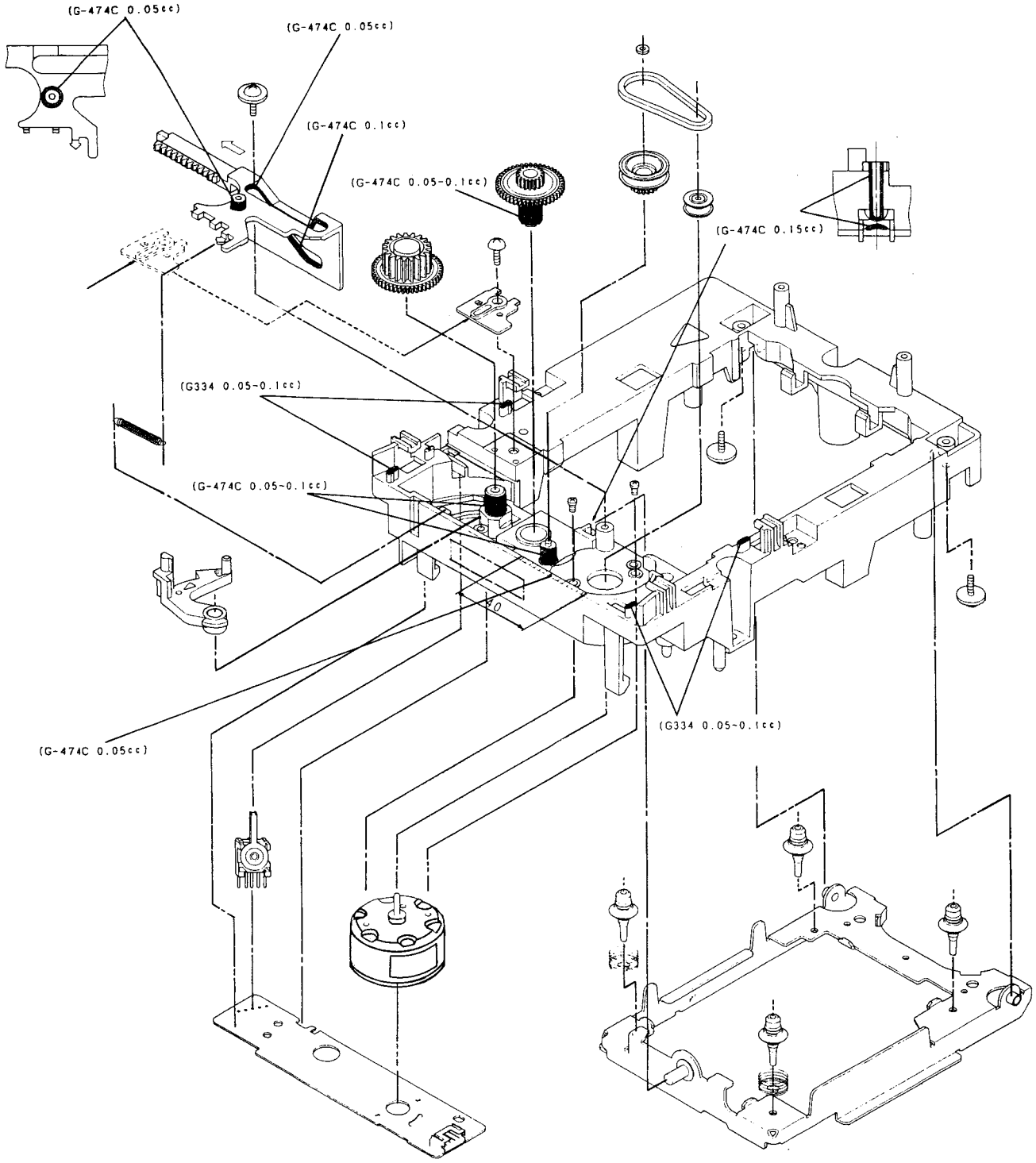
Pin No.	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Electrode	P (g)	P (c)	P (e)	P (d)	P (h)	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NP	F2	F2

Note ···· F : Filament, G : Grid, a~i : Element, NP : No pin, NC : No connection

Application Points for Grease

Grease used

- G-334 (Shin-Etsu Chemical Co., Ltd.)
- G-474C (Kanto Chemical Co., Ltd.)



Grease part numbers

G-334: EBS0006-009B
G-474C: EBS0006-019B

Disassembly Procedures

1. Removing the metal cover

1) Remove the 4 screws holding the both sides of the metal cover, and the 2 screws holding the rear side of it.
2) Gently spread both sides of the metal cover to the outside, lift up the rear section, and remove the metal cover.

2.Removing the tray assembly

1) Remove the metal cover.
2) Turn on the power. Press the OPEN / CLOSE switch to move the tray out and the power off.
3) Remove the screw Ⓐ on the tray.
4) Pull the tray toward the front to move it.

Note: If the power can not be turned on due to a malfunction , etc., insert a Philips screwdriver through the hole on the bottom and turn it clockwise to move the tray out.

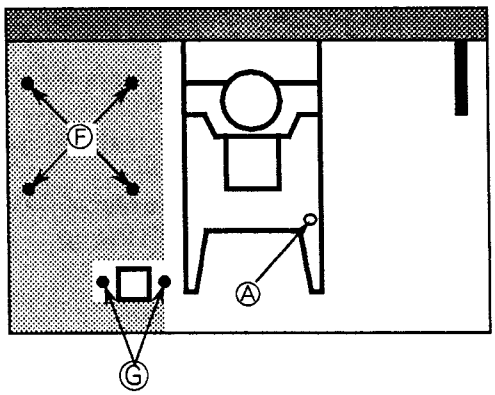


Figure 1

3.removing the mechanism assembly

1) Remove the metal cover.
2) Remove the tray assembly.
3) Remove the 2 screws Ⓑ holding the clamp assembly, then remove the clamp assembly.
4) Remove the 3 screws Ⓒ holding the mechanism assembly.

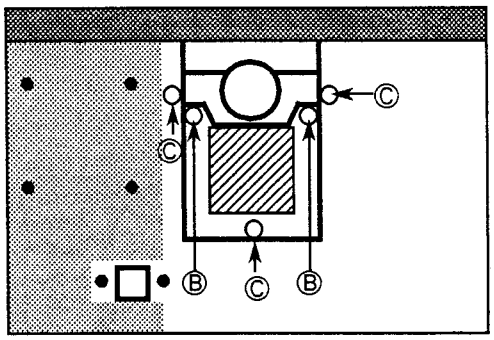


Figure 2

4.Removing the rear panel

1) Remove the 6 screws Ⓓ holding the rear panel.(8 screws Ⓓ, Ⓔ for with AC selector)
2) Remove the rear panel.

5.Removing the main P.C. Board

(FSN-004-1 for XL-V161TN/162BK,FSN-005-1 for XL-V261TN/262BK)

1) Remove the metal cover.
2) Remove the rear panel.
3) Remove the 4 screws Ⓕ holding the P.C.board and 2 screws Ⓖ holding the transformer.
4) Remove the connectors connecting with the main P.C.board.

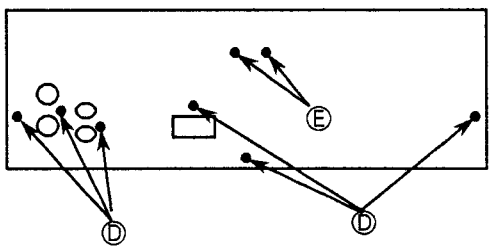


Figure 3

6.Removing the front panel assembly

1) Remove the metal cover.
2) Remove the tray assembly.
3) Remove the screw Ⓗ on the bottom of the front panel.
4) Remove the connector.
5) Remove the screw Ⓘ holding the bracket.
6) Release the hooks Ⓙ holding the front panel and remove the front panel assembly.

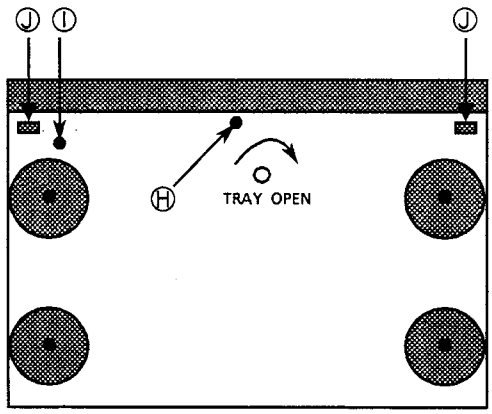


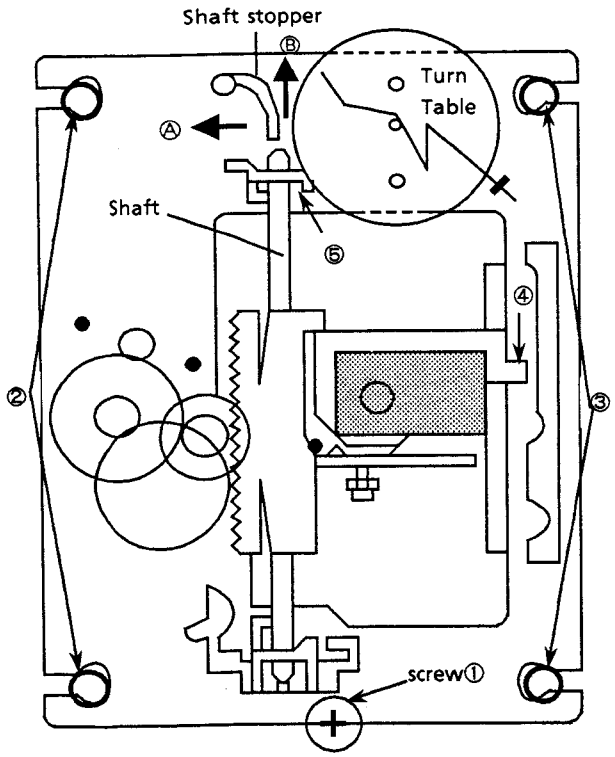
Figure 4

7. Removing the Laser Pickup

1) Remove the metal cover, tray assembly and the clamp.
2) Remove the screw ① from the Mecha Base assembly.
3) Remove the Mecha Base assembly from the rubber cushion ②③.
4) Move the Shaft stopper from the rest position to the left side Ⓐ.
5) Remove the Pickup Shaft from the Mecha Base assembly.(Slide the Pickup shaft to the up sideⒷ)
6) Remove the CD Pick Unit with the shaft.

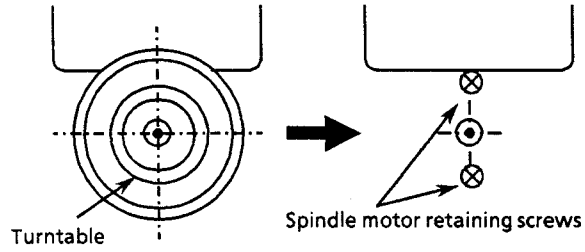
8. Installing the Laser Pickup

1) Connect the Flat wire with the connectors of APC (Automatic Power Control) P.C.Board.
2) While installing the ④ in the CD Support, set the shaft on the base hook⑤.
3) Install the Mecha Base assembly to the rubber cushion ②③..



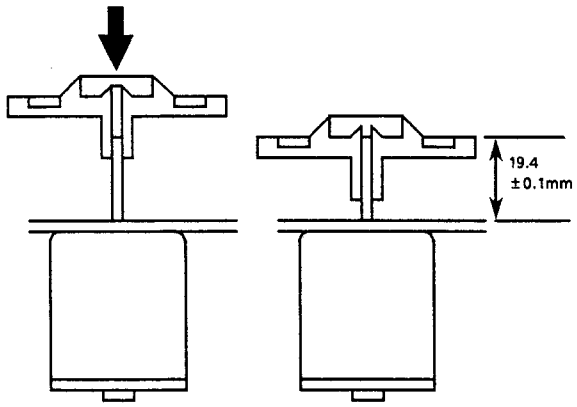
9. Removing the spindle motor

1) Remove the Mechanism assembly.
2) Remove the turntable, and remove the two screws retaining the spindle motor.
3) Remove the screw retaining the spindle and the Feed Motor P.C. Board and unsolder it.

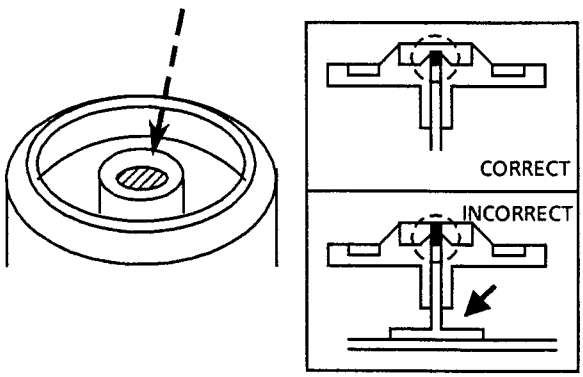


10. Installing the spindle motor

1) Tighten the 2 screws to the same torque.
2) Fasten the Spindle and the Feed Motor P.C. Board with the screw and solder.
3) Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the top of the turntable is exactly 19.4 ± 0.1mm.

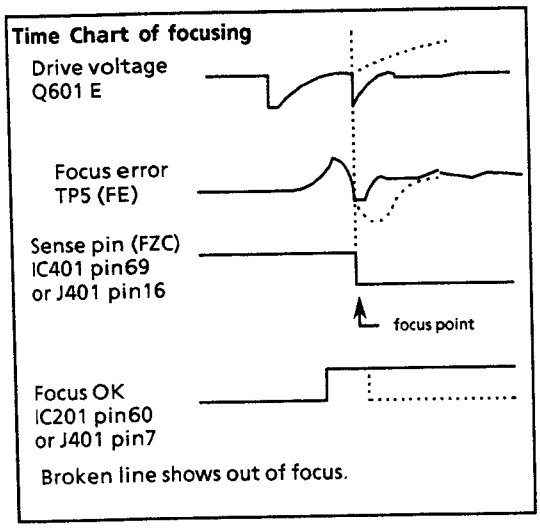


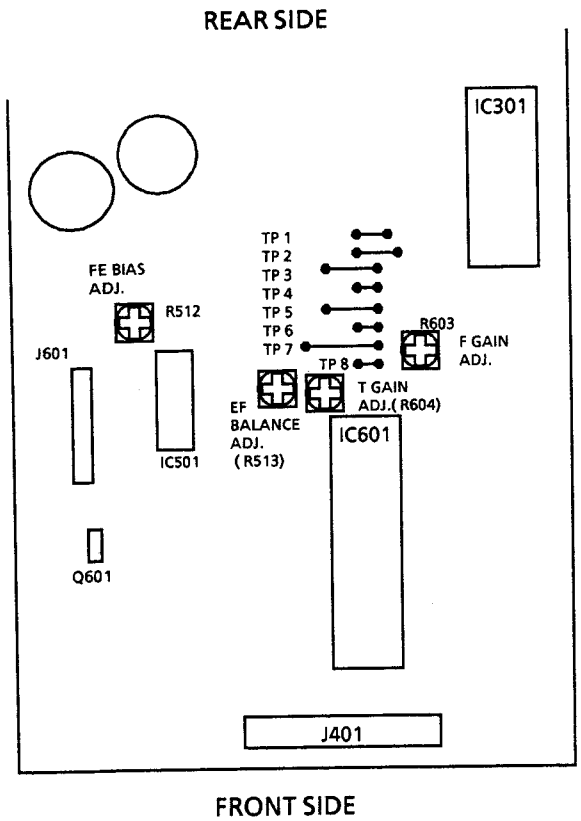
4) After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).

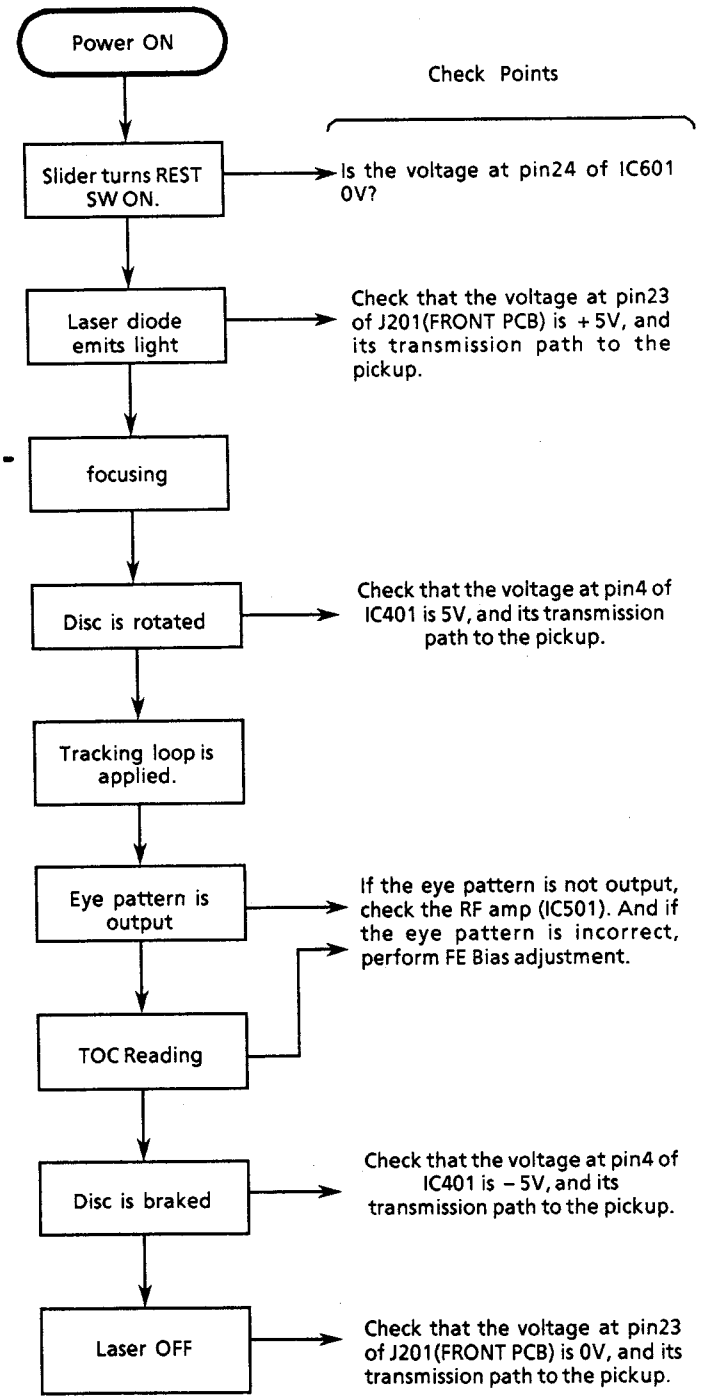


5) Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in the figure on the right).

Flow of Functional Operation Until TOC is Read





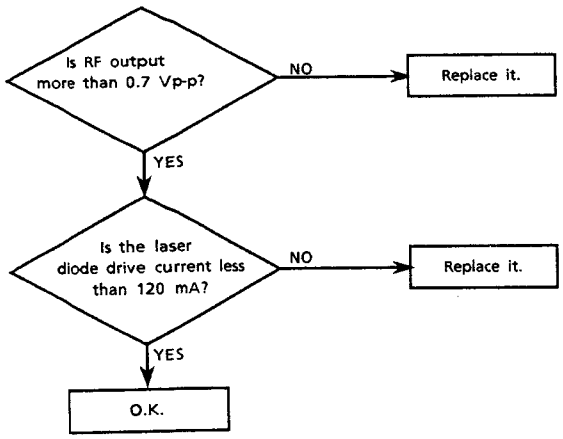

Power ON
Check Points
Slider turns REST SW ON.
Is the voltage at pin24 of IC601 0V?
Laser diode emits light
Check that the voltage at pin23 of J201(FRONT PCB) is +5V, and its transmission path to the pickup.
focusing
Disc is rotated
Check that the voltage at pin4 of IC401 is 5V, and its transmission path to the pickup.
Tracking loop is applied.
Eye pattern is output
If the eye pattern is not output, check the RF amp (IC501). And if the eye pattern is incorrect, perform FE Bias adjustment.
TOC Reading
Disc is braked
Check that the voltage at pin4 of IC401 is −5V, and its transmission path to the pickup.
Laser OFF
Check that the voltage at pin23 of J201(FRONT PCB) is 0V, and its transmission path to the pickup.

Maintenance of Laser Pickup

1. Life of the laser diode

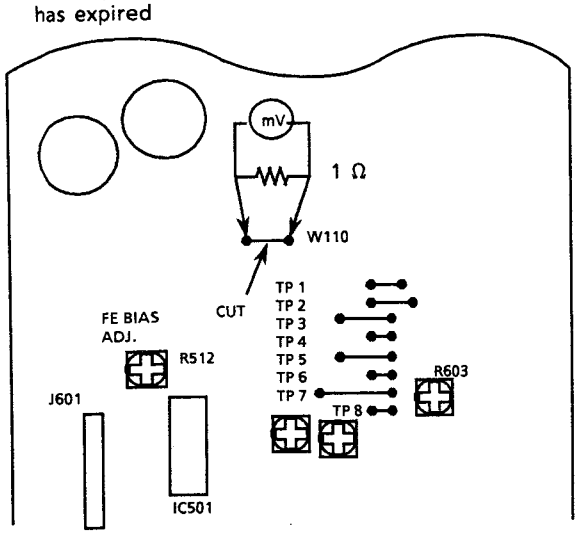
When the life of the laser diode has expired, the following symptoms will appear.

1) The level of RF output (EFM output: amplitude of eye pattern) will be low.
2) The drive current required by the laser diode will be increased.
   In such a case, check the life of the laser diode following the flowchart below.



2. Measurement of laser diode drive current

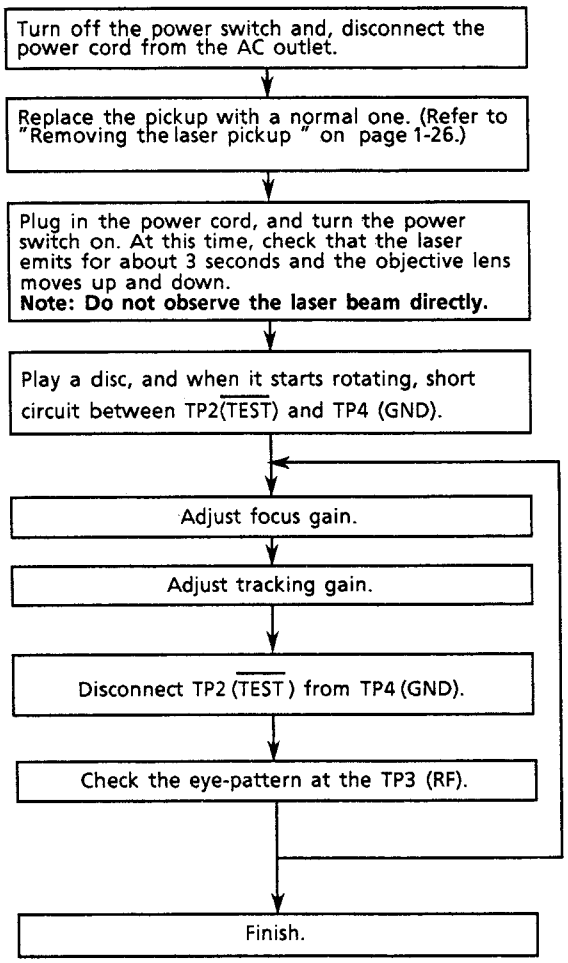
Replace the jump wire (W110) shown below with the resistor (1Ω).
Measure the voltage across the resistor with a milli-voltmeter. When the voltage is more than 120mV, it shows that the life of the laser diode has expired



3. Semi-fixed resistor on the APC PC board

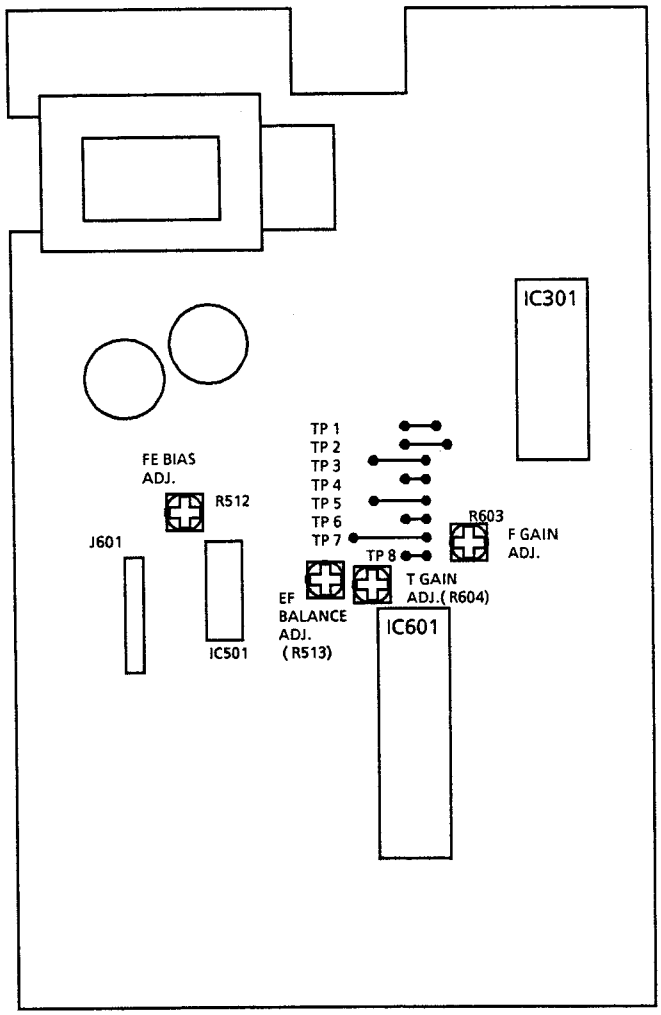
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, **do not touch the semi-fixed resistor.**
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the AC outlet.
Replace the pickup with a normal one. (Refer to "Removing the laser pickup " on page 1-26.)
Plug in the power cord, and turn the power switch on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc, and when it starts rotating, short circuit between TP2(TEST) and TP4 (GND).
Adjust focus gain.
Adjust tracking gain.
Disconnect TP2 (TEST) from TP4 (GND).
Check the eye-pattern at the TP3 (RF).
Finish.

Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Adjustment Procedures



■ FE Bias

1. Connect an oscilloscope to TP 5(FE) and TP 4(GND).
2. Adjust R512(FE bias) so that the DC voltage at TP 5 becomes 0 ± 10mV.

■ EF balance

1. Connect an oscilloscope to TP 7(TE) and TP 4(GND).
2. Load a disc and press the play button.
3. Short-circuit between TP 2(TEST) and TP 4(GND).
4. Adjust R513(EF balance) so that the center of the waveform at TP 7(TE) bocomes 0V.

■ Gain adjustment

If the gain is out of adjustment, the symptoms below will appear.

●Gain too low

Focus gain	:	Focus is not obtained and disc does not rotate.
Tracking gain	:	Mechanical shock occurs easily and sound is interrupted. Or time counter display stop counting.

●Gain too high

Focus gain	:	Scratches (on the disc) easily interrupt play, and noise is increased during play.
Tracking gain	:	Since the follow-up ability of the pickup is too high, the pickup may oscillate and oscillating sound may output.

As described above, the focus and tracking gain adjustment are performed so as to satisfy mutually contradictory characteristics.
A simplified adjustment procedure is described below. However, since exact adjustment can not be performed prior to adjustments, note(or mark) the positions of the semi-fixed VRs.
If the positions after the simplified adjustment are only different, return the VRs to their original position.

Focus gain adjustment

1. Connect an oscilloscope to TP 5(FE) and TP 4(GND).
2. Load a disc and press the PLAY button.
3. Adjust R603(F.GAIN ADJ.) so that the waveform becomes below figure 1.

Tracking gain adjustment

1. Connect an oscilloscope to TP 7(TE) and TP 4(GND).
2. Load a disc and press the PLAY button.
3. Adjust R604(T.GAIN ADJ.) so that the waveform becomes below figure 2.

Focus Gain Adjustment

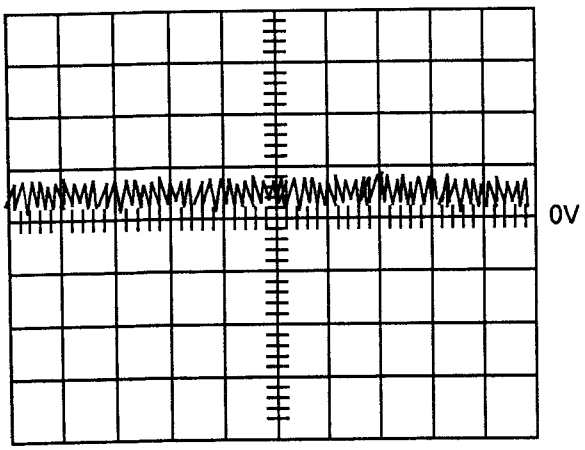


Figure - 1

Tracking Gain Adjustment

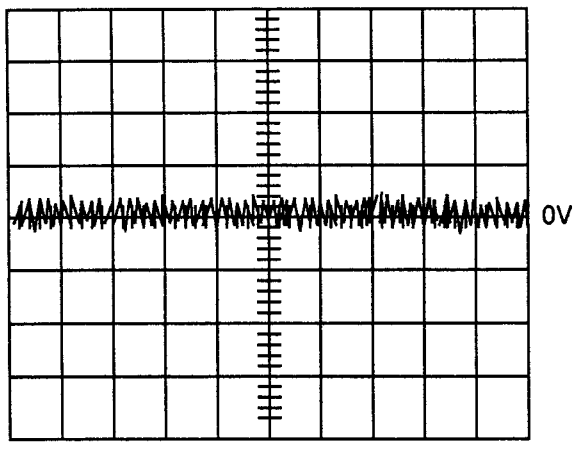
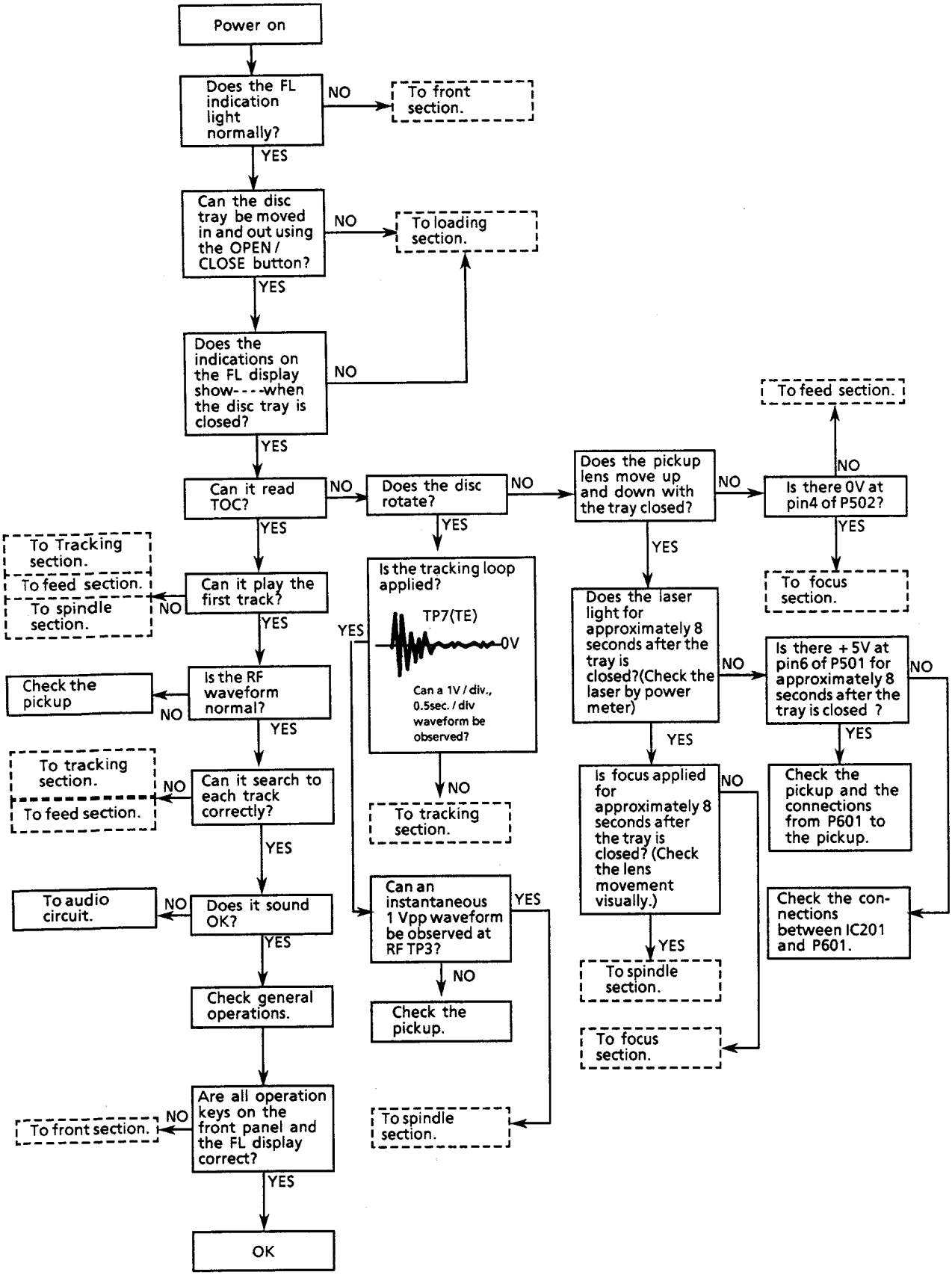


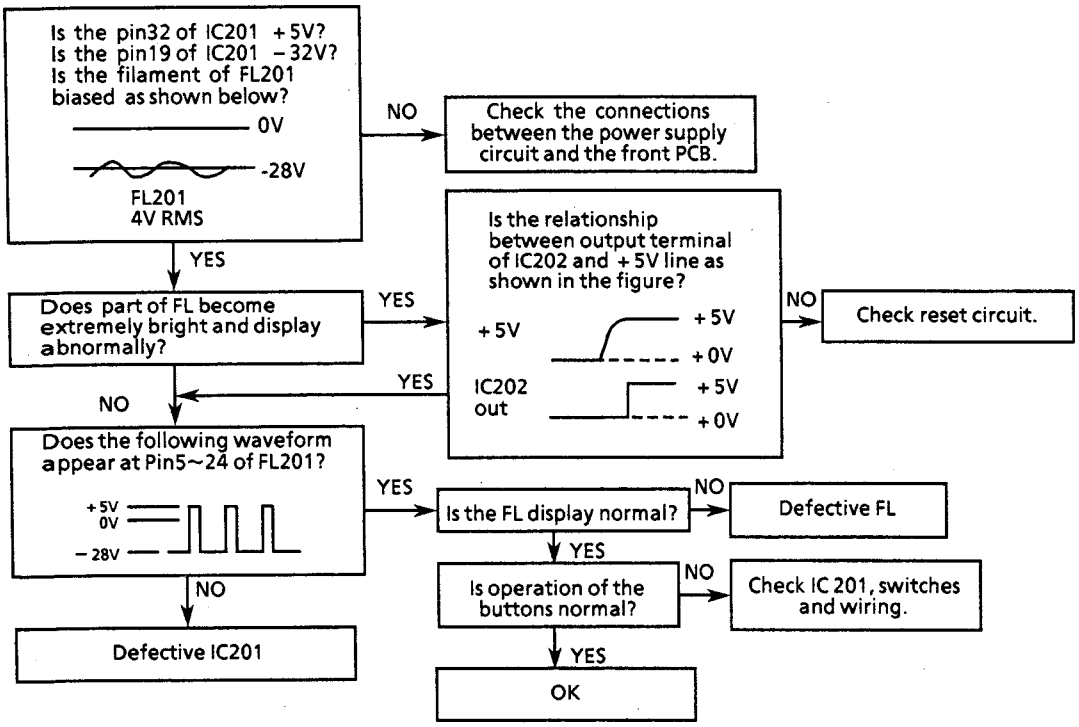
Figure - 2

Troubleshooting

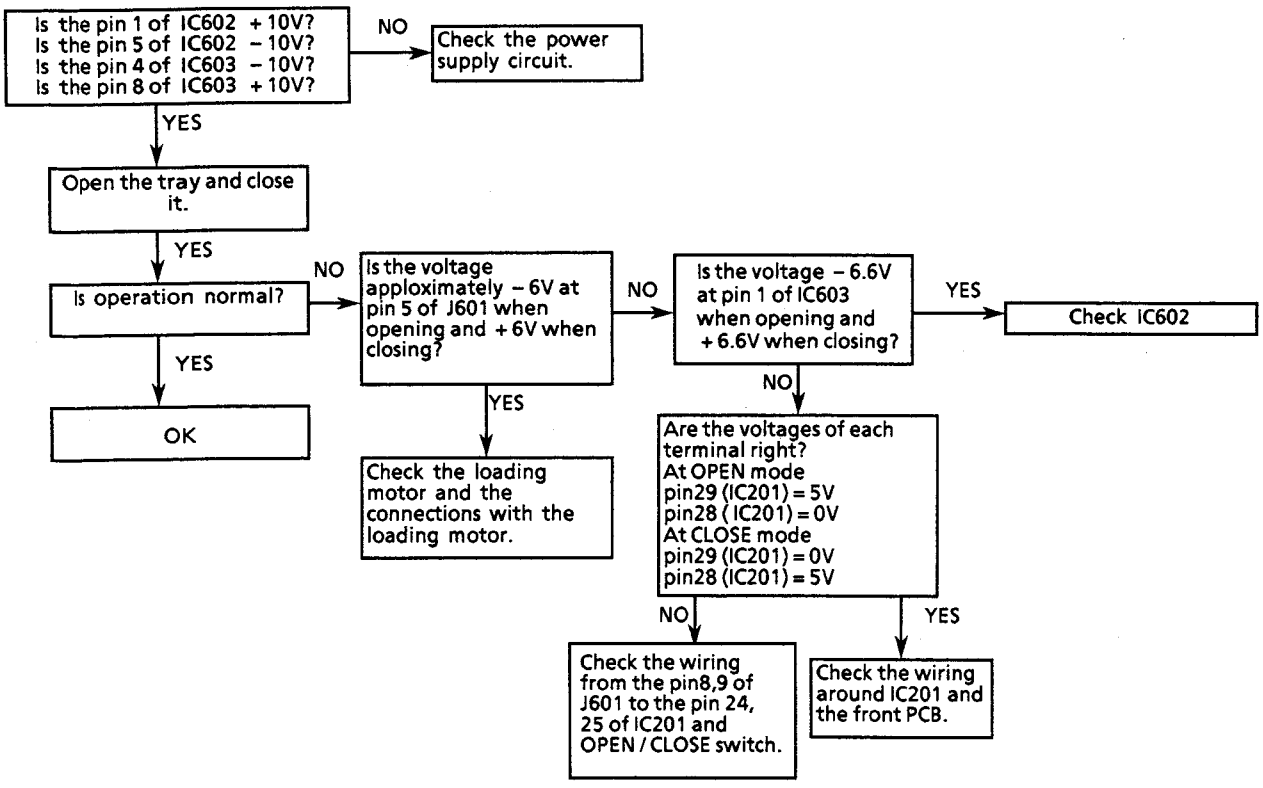
The following shows the status of the various circuits from turning on the power to the start of disc play



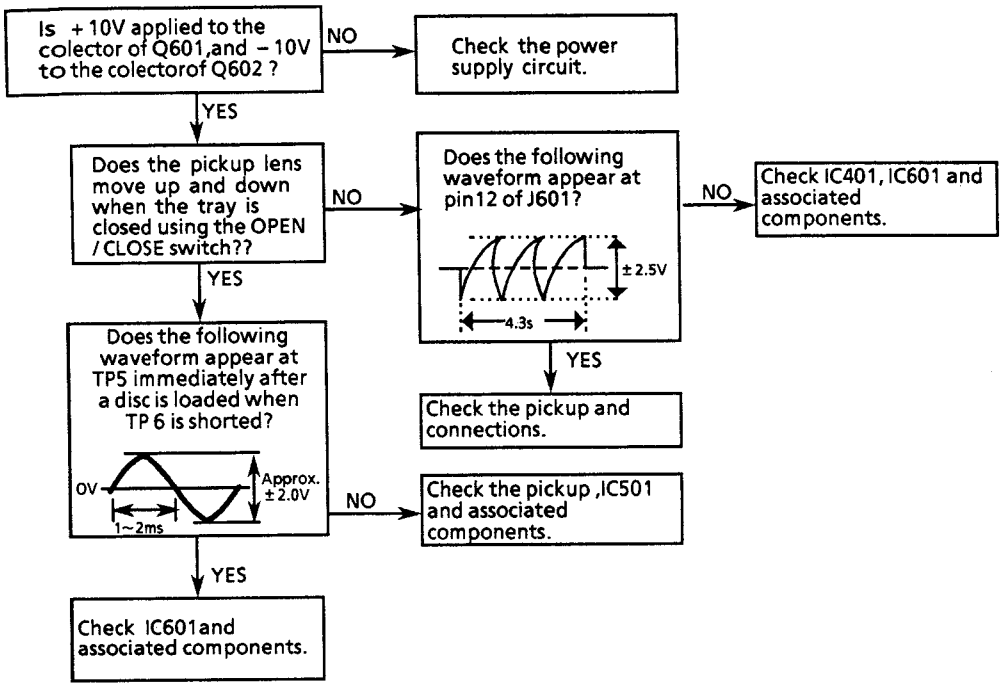
Front Section



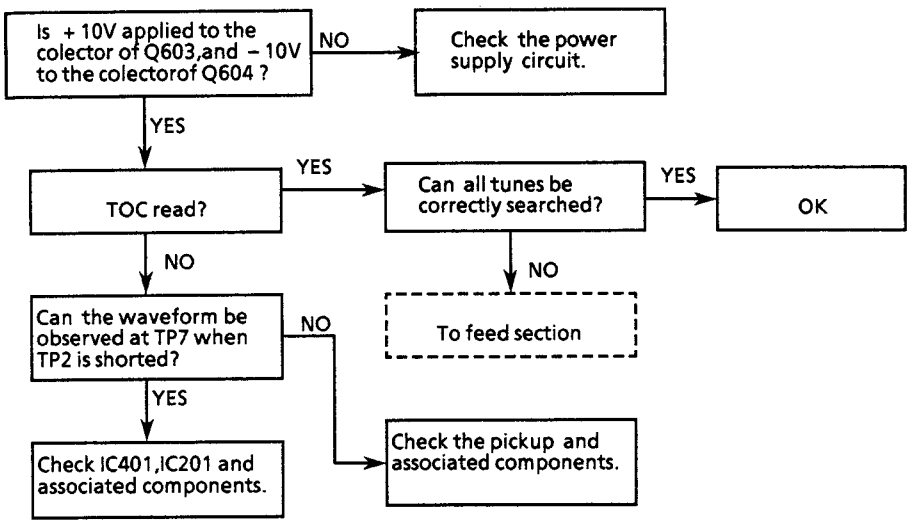
Loading section


Is the pin 1 of IC602 +10V?
Is the pin 5 of IC602 −10V?
Is the pin 4 of IC603 −10V?
Is the pin 8 of IC603 +10V?
NO
Check the power supply circuit.
YES
Open the tray and close it.
YES
Is operation normal?
NO
Is the voltage approximately −6V at pin 5 of J601 when opening and +6V when closing?
NO
Is the voltage −6.6V at pin 1 of IC603 when opening and +6.6V when closing?
YES
Check IC602
YES
OK
YES
Check the loading motor and the connections with the loading motor.
NO
Are the voltages of each terminal right?
At OPEN mode
pin29 (IC201) = 5V
pin28 (IC201) = 0V
At CLOSE mode
pin29 (IC201) = 0V
pin28 (IC201) = 5V
NO
YES
Check the wiring from the pin8,9 of J601 to the pin 24, 25 of IC201 and OPEN / CLOSE switch.
Check the wiring around IC201 and the front PCB.

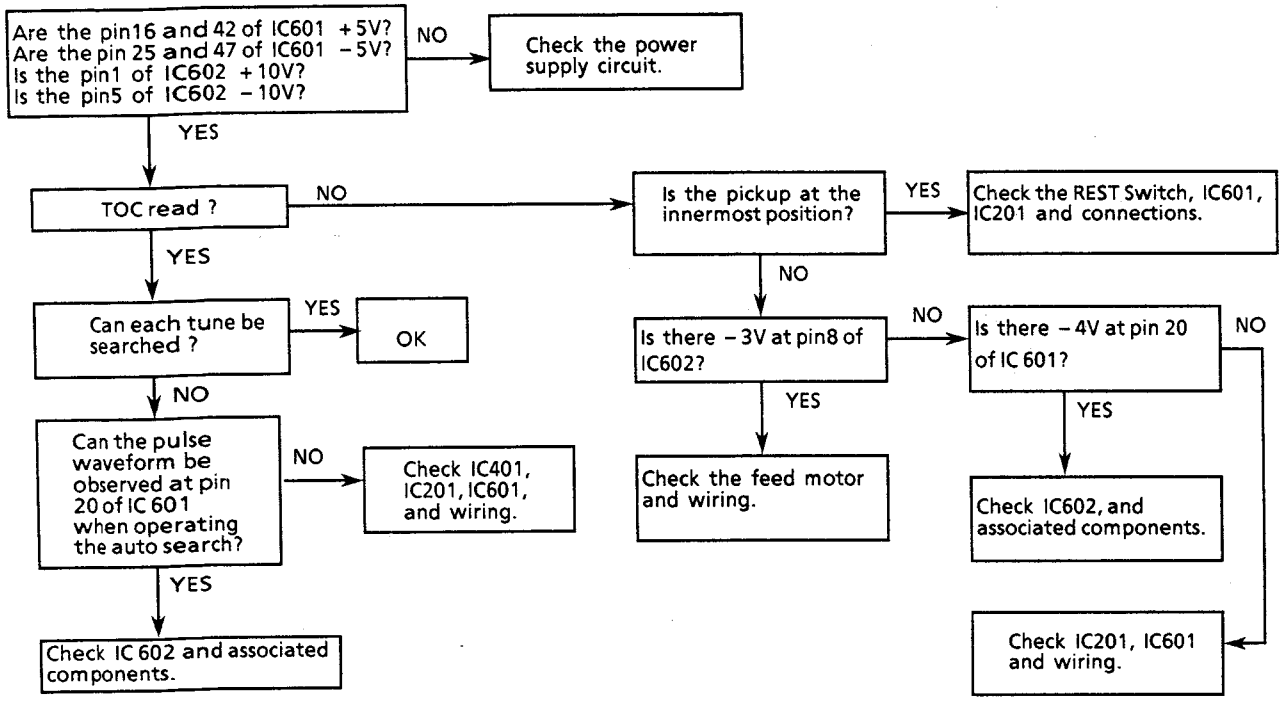
Focus section


Is +10V applied to the colector of Q601,and −10V to the colectorof Q602 ?
NO
Check the power supply circuit.
YES
Does the pickup lens move up and down when the tray is closed using the OPEN / CLOSE switch??
NO
Does the following waveform appear at pin12 of J601?
NO
Check IC401, IC601 and associated components.
±2.5V
4.3s
YES
Check the pickup and connections.
YES
Does the following waveform appear at TP5 immediately after a disc is loaded when TP 6 is shorted?
0V
Approx. ±2.0V
1~2ms
NO
Check the pickup ,IC501 and associated components.
YES
Check IC601and associated components.

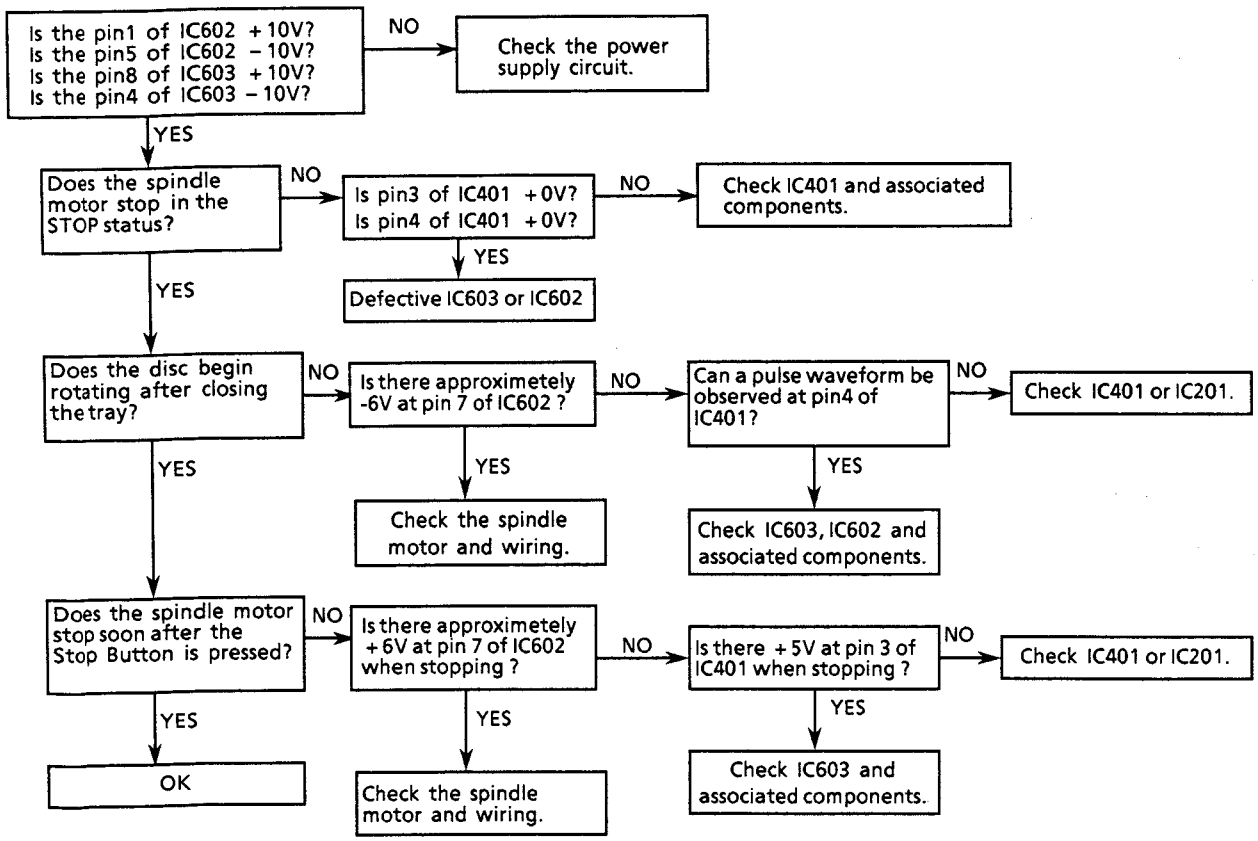
Tracking section



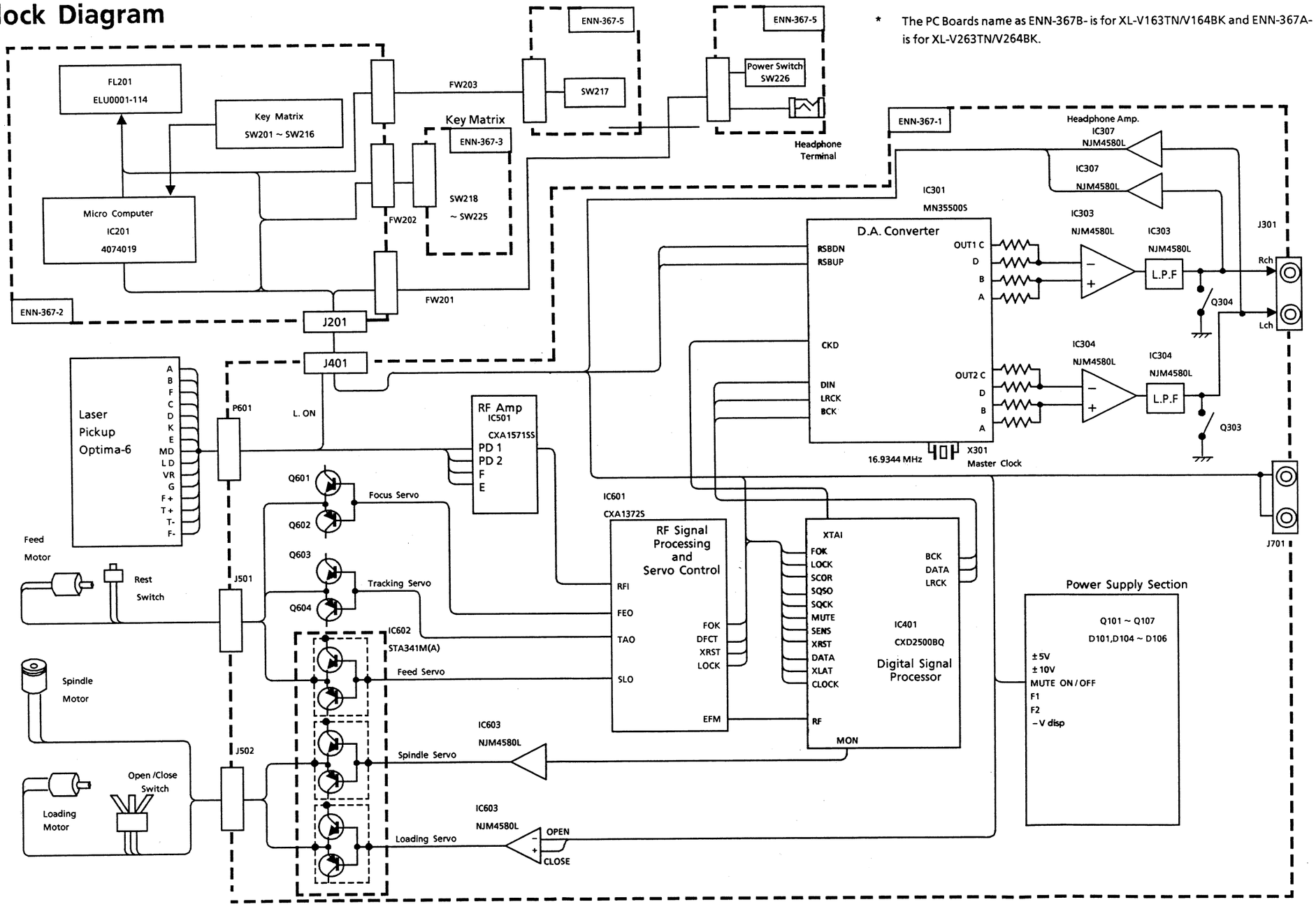
Feed section


Are the pin16 and 42 of IC601 +5V?
Are the pin 25 and 47 of IC601 −5V?
Is the pin1 of IC602 +10V?
Is the pin5 of IC602 −10V?
NO
Check the power supply circuit.
YES
TOC read ?
NO
Is the pickup at the innermost position?
YES
Check the REST Switch, IC601, IC201 and connections.
YES
NO
Can each tune be searched ?
YES
OK
NO
Is there −3V at pin8 of IC602?
NO
Is there −4V at pin 20 of IC 601?
NO
YES
YES
Can the pulse waveform be observed at pin 20 of IC 601 when operating the auto search?
NO
Check IC401, IC201, IC601, and wiring.
YES
Check the feed motor and wiring.
Check IC602, and associated components.
Check IC 602 and associated components.
Check IC201, IC601 and wiring.

Spindle section


Is the pin1 of IC602 +10V?
Is the pin5 of IC602 −10V?
Is the pin8 of IC603 +10V?
Is the pin4 of IC603 −10V?
NO
Check the power supply circuit.
YES
Does the spindle motor stop in the STOP status?
NO
Is pin3 of IC401 +0V?
Is pin4 of IC401 +0V?
NO
Check IC401 and associated components.
YES
Defective IC603 or IC602
YES
Does the disc begin rotating after closing the tray?
NO
Is there approximetely -6V at pin 7 of IC602 ?
NO
Can a pulse waveform be observed at pin4 of IC401?
NO
Check IC401 or IC201.
YES
YES
YES
Check the spindle motor and wiring.
Check IC603, IC602 and associated components.
Does the spindle motor stop soon after the Stop Button is pressed?
NO
Is there approximetely +6V at pin 7 of IC602 when stopping ?
NO
Is there +5V at pin 3 of IC401 when stopping ?
NO
Check IC401 or IC201.
YES
YES
YES
OK
Check the spindle motor and wiring.
Check IC603 and associated components.

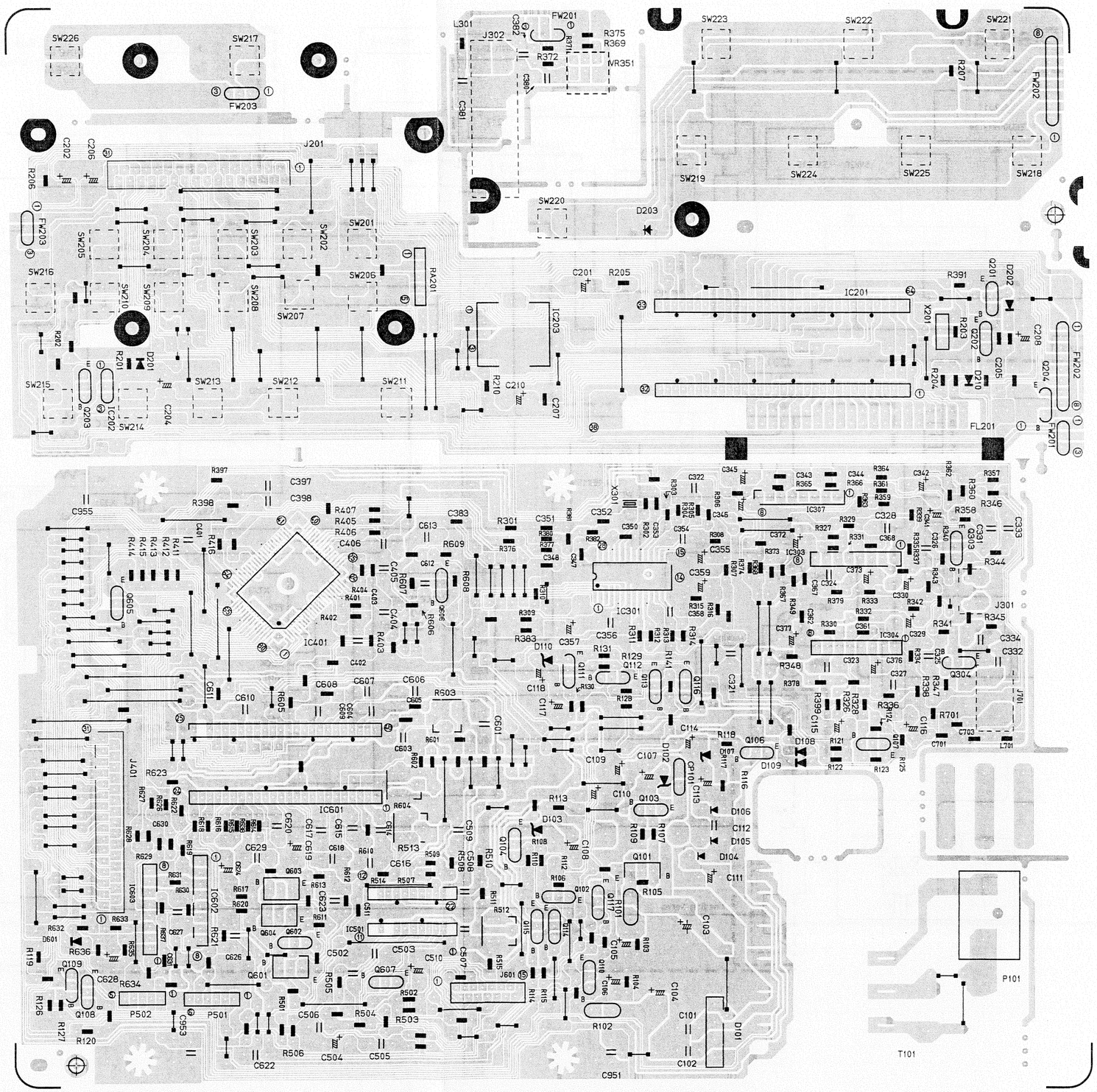
Block Diagram



* The PC Boards name as ENN-367B- is for XL-V163TN/V164BK and ENN-367A- is for XL-V263TN/V264BK.

Printed Circuit Board

XL-V163TN/V164BK	XL-V163TN/V164BK
XL-V263TN/V264BK	XL-V263TN/V264BK


SW226
SW217
FW203
L301
J302
C382
FW201
R375
R369
R371
R372
VR351
C380
C381
SW223
SW222
SW221
R207
FW202
SW219
SW224
SW225
SW218
SW220
D203
J201
C202
C206
R206
FW203
SW205
SW204
SW203
SW202
SW201
SW216
SW210
SW209
SW208
SW207
SW206
RA201
R202
R201
D201
SW215
Q203
IC202
SW214
SW213
SW212
SW211
C204
C201
R205
IC203
R210
C210
C207
IC201
R391
Q201
D202
X201
R203
Q202
C208
C205
R204
D210
Q204
FW202
FW201
FL201
R397
C397
C398
R398
C955
R407
R405
R406
C406
C613
R609
R301
C351
C352
C383
R376
C348
C347
R608
R607
C612
R606
C405
C403
C404
R404
R401
R402
IC401
C402
R403
R309
R383
C357
C356
D110
C118
C117
R131
R129
Q112
Q111
R130
R128
Q116
R141
C321
R314
R311
R313
C358
R315
R316
C359
C355
R308
R374
R307
C354
C350
R302
C353
R380
R377
R381
R382
X301
R303
R305
R304
R396
C345
C322
C343
R365
C344
R366
R361
R364
R359
C342
R362
R357
R360
R358
R346
C333
IC307
R329
R327
R331
C328
C368
R335
R337
R340
Q303
C331
R344
C372
IC303
R373
C373
C324
C367
R379
R333
C330
R342
R343
J301
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R341
C334
C332
Q304
IC304
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C116
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C703
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L701
J701
C114
R118
Q106
D108
D109
R121
R122
R123
R125
C109
C107
D102
CP101
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R116
D106
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R107
R108
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R112
R110
Q104
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C619
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Q604
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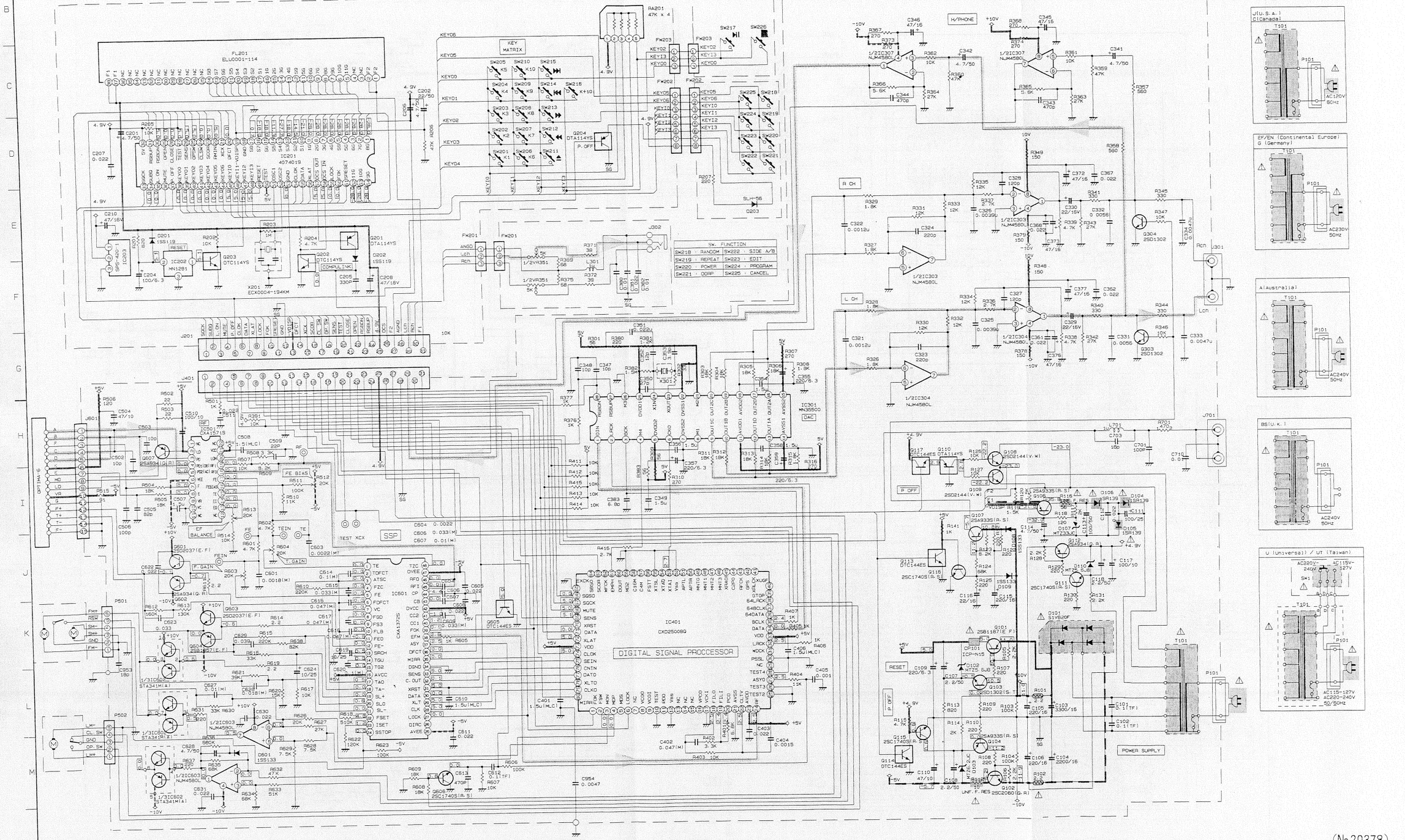
Schematic Diagrams

XL-V163TN/V164BK

How to Use Schematic Diagrams

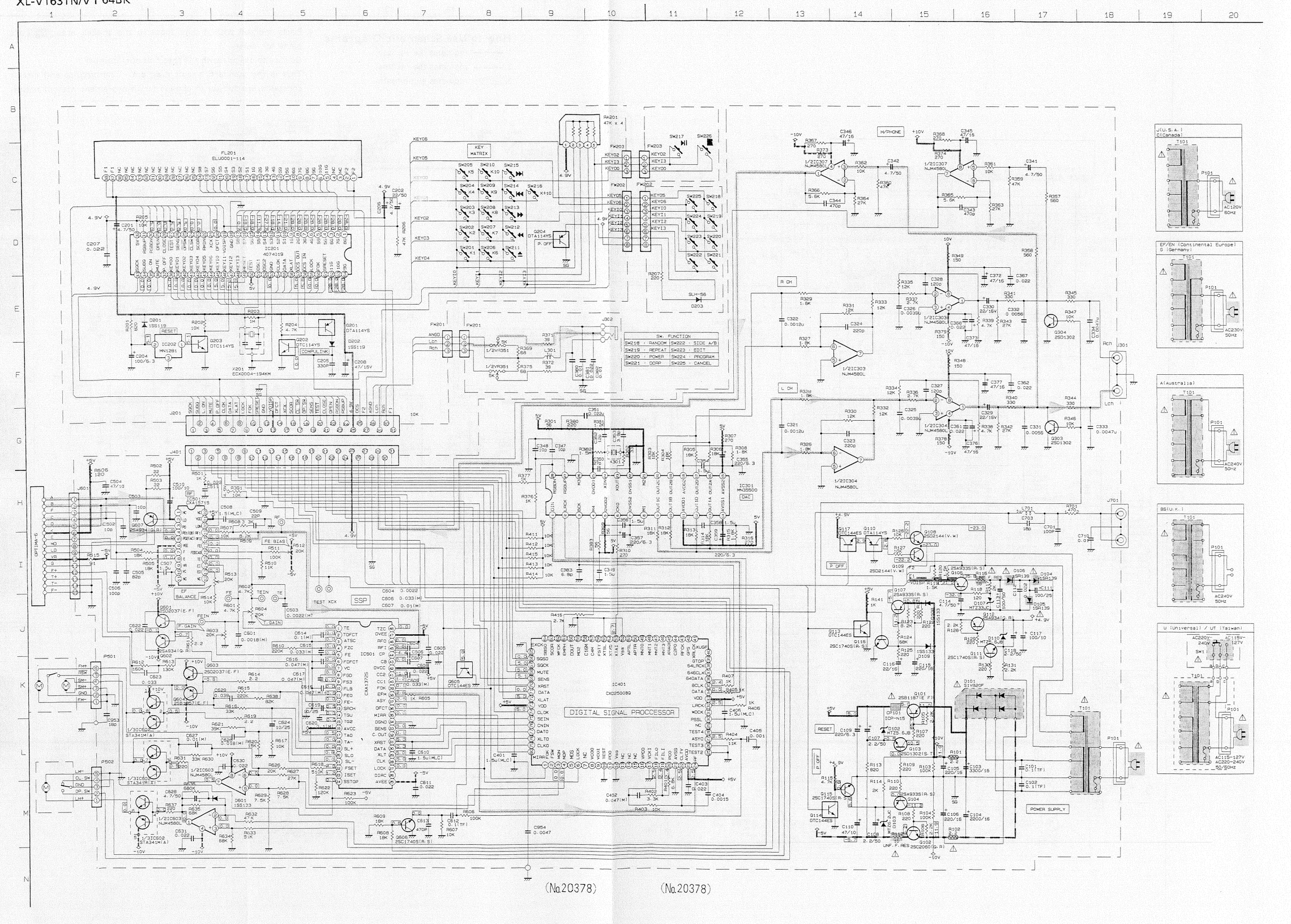
1. ——— indicates the +B line.
2. - - - - - - indicates the −B line.
3. ▒▒▒ indicates signal path.
4. Parts marked with ⚠ and those in the shaded area ▒▒▒ are parts for safety.
   Be sure to use one with the specified part number.
5. This is the standard circuit diagram. The circuits and circuit constants are subject to change for improvement without notice.



(No.20378)

XL-V163TN/V164BK XL-V163TN/V164BK
XL-V263TN/V264BK XL-V263TN/V264BK

XL-V163TN/V164BK



PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

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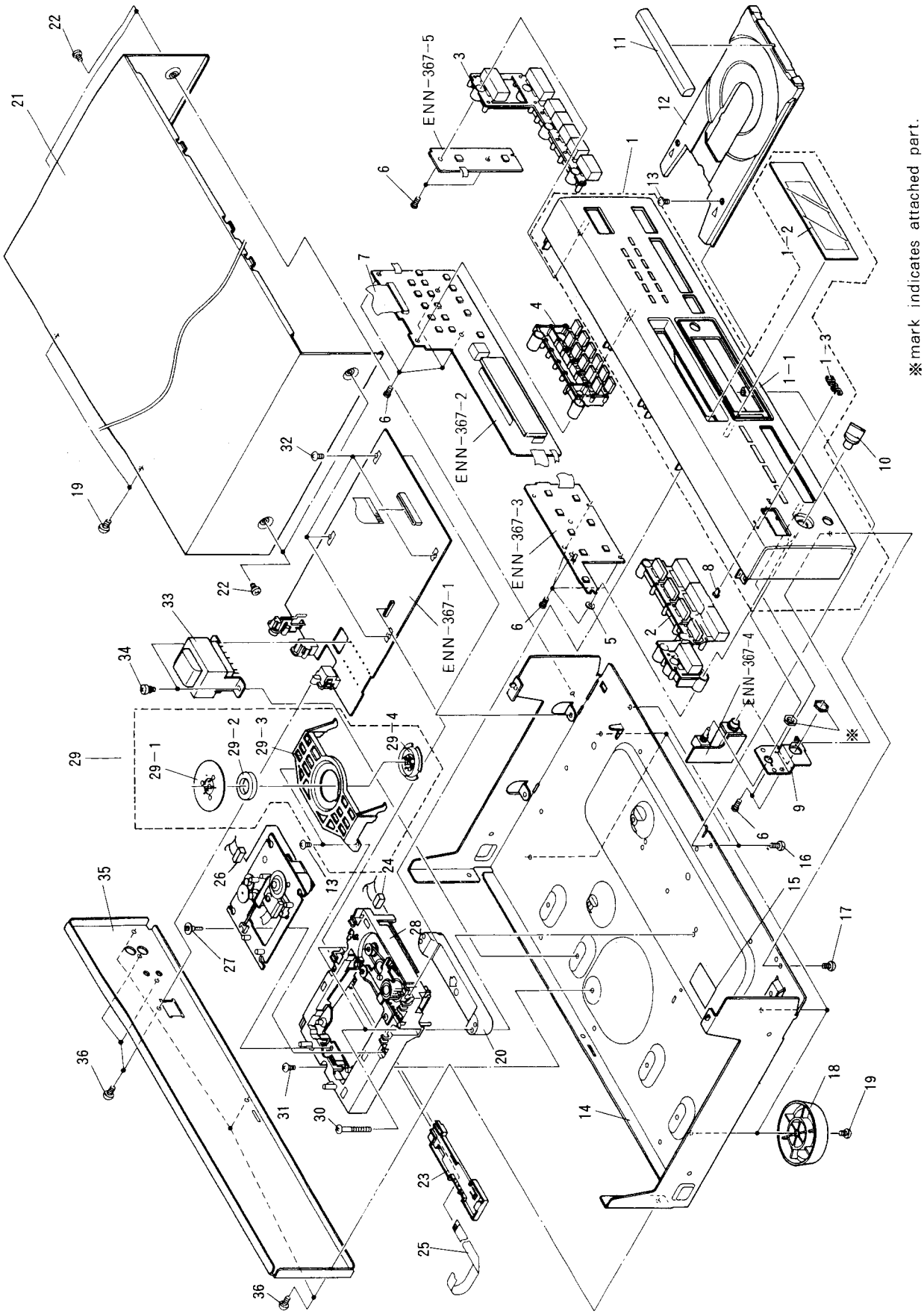
CD Mechanism Ass'y and Parts List 2-5
Printed Circuit Board Ass'y and Parts List 2-7
■ ENN-367 □ Main & Front PC Board Ass'y 2-7
Accessories List 2-11
Packing Materials and Part Numbers 2-12

-V164BK

General Exploded View and Parts List



■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLV164BKE(S	FRONT PANEL	1		
	1-1	E102657-008SF	FRONT PANEL	1		
	1-2	E308327-006SF	WINDOW SCREEN	1		
	1-3	VJD5429-001	JVC MARK	1		
	2	FSXP2002-010SS	POWER BTTON	1		
	3	FSXP2003-010SS	OPEN BTTON	1		
	4	FSXP2004-002	PUSH BUTTON	1		
	5	E407612-001	WASHER	1		
	6	SDSF2608Z	SCREW	14		
	7	EWR131K-10TTJ3	FLAT WIRE	1		
	8	FSJD4001-001	POWER INDICATOR	1		
	9	E407416-001SF	HEADPHONE BRACKET	1		
	10	E74179-009	VOLUME KNOB	1		
	11	FSJC3002-006SS	FITTING	1		
	12	E102358-002SF	CD TRAY	1		
	13	SBSF3008M	SCREW	3		
	14	E102355-221SF	CHASSIS BASE	1		
	15	E406507-001	CAUTION LABEL	1		
	16	SDSF3008M	SCREW	2		
	17	SBSG3008M	SCREW	1		
	18	E406282-005SF	FOOT ASSY	4		
	19	SBST3008M	SCREW	6		
	20	E307158-003SS	STAND	1		
	21	E206906-223	METAL COVER	1		
	22	E406308-001	SPECIAL SCREW	4		
	23	E308181-221SS	FFC HOLDER	1		
	24	EWS265-B408	SOCKET WIRE	1		
	25	EWPZ02-003	FFC CABLE	1		
	26	EWS266-B410	SOCKET WIRE	1		
	27	E406293-002	SPECIAL SCREW	1		
	28	----------	CD MECHANISM UNIT ASSY	1	See page 2-5	
	29-1	E306836-223SS	YOKE PLATE	1		
	29-2	E74897-002	MAGNET	2		
	29-3	E26756-331SF	CLAMPER BASE	1		
	29-4	E306835-221SS	CD CLAMPER	1		
	30	SBST3025Z	SCREW	2		
	31	SBST3008Z	SCREW	1		
	32	SBSG3008CC	SCREW	4		
⚠	33	ETP1000-74EAJBS	POWER TRANSFORMER	1		BS
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		EF
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		EN
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		G
	34	E65389-002	SPECIAL SCREW	2	FOR TRANS FORMER	
	35	E206904-222SF	REAR PANEL	1		
	-	E308453-012	RATING LABEL	1		EN
	-	E308453-012	RATING LABEL	1		EF
	-	E308453-013F	RATING LABEL	1		G
	36	E73273-006	SPECIAL SCREW	6	FOR JACKS	
	-	E61029-005	NUMBER LABEL	1		
	-	E406507-001	CAUTION LABEL	1		

-V164BK

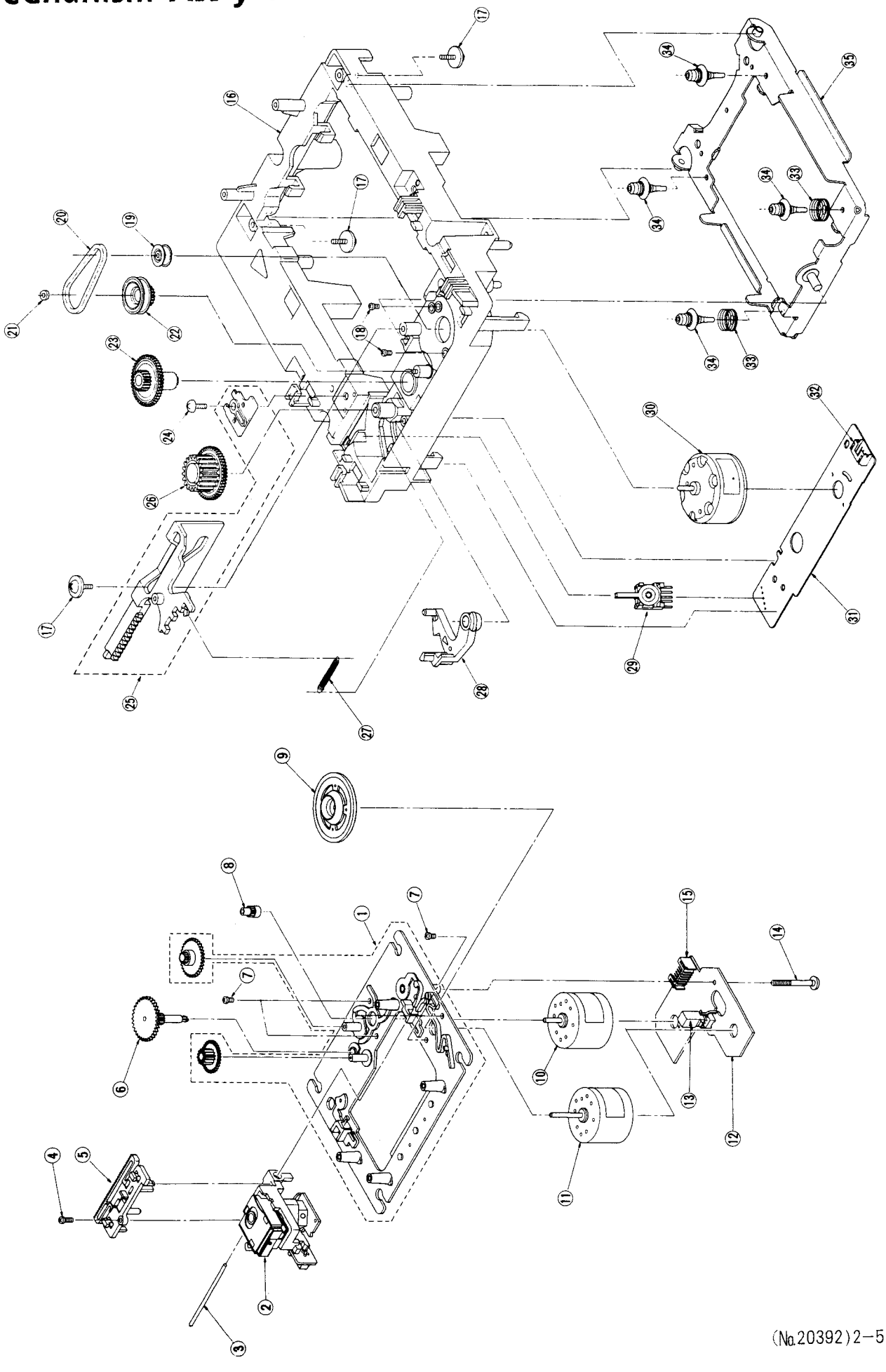
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	-	E70891-001	CLASS 1 LABEL	1		
	-	QZL1031-101	LABEL	1		EF
	-	E70027-001	LABEL	1		EN
	-	E70419-002F	F.MARK LABEL	1		G

⚠ : Safety Parts

The Marks for Designated Areas

BS .... the U.K
EN .... Scandinavia
G ..... Germany
No mark indicates all area.
EF .... Continental Europe

CD Mechanism Ass'y and Parts List



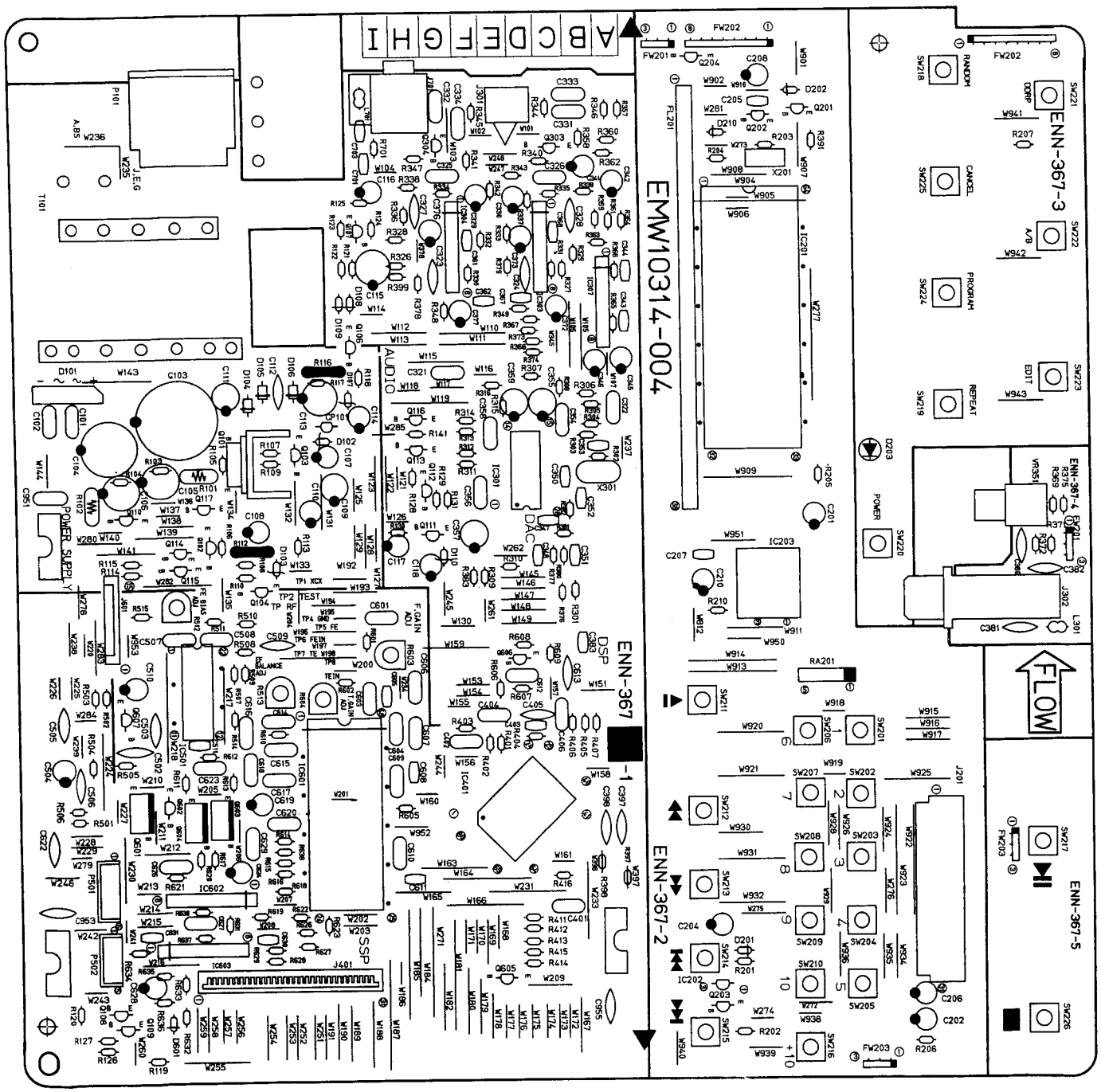
■ Parts List (CD Mechanism Ass'y)

Item	Part Number	Part Name	Q'ty	Description	Area
1	EPB-002A	MECHANISM BASE ASSY	1		
2	OPTIMA-6S	PICK UP ASS'Y	1		
3	E406777-001	SHAFT	1		
4	SDSF2006Z	SCREW	1		
5	E307746-001	CD RACK	1		
6	EPB-003A	MECHANISM BASE ASSY	1		
7	SDSP2003N	SCREW	4		
8	E406750-001	PINION GEAR	1		
9	EPB-001C	TURNTABLE	1		
10	E406784-001	DC MOTOR	1		
11	E406783-001	DC MOTOR	1		
12	EMW10190-001(S)	CIRCUIT BOARD	1		
13	ESB1100-005	LEAF SWITCH	1		
14	E75832-001	SPECIAL SCREW	1		
15	EMV5109-006B	PLUG ASSY	1	6PIN	
16	E102357-221	LOADING BASE	1		
17	E65923-003	SCREW	3		
18	SPSK2640Z	SCREW	2		
19	E75984-001	MOTOR PULLEY	1		
20	E75950-002	BELT	1		
21	E72024-001	SPEED NUT	1		
22	E75985-001	GEAR	1		
23	E75986-002	GEAR	1		
24	SBSF3008Z	SCREW	1		
25	E307252-221	CAM - PLATE	1		
26	E75987-001	REEL GEAR	1		
27	E75989-001	SPRING	1		
28	E307162-221	LEVER	1		
29	ESS1200-002	SLIDE SWITCH	1		
30	RF-500TB-12560	MOTOR	1		
31	EMW10255-002(S)	CIRCUIT BOARD	1		
32	EMV5109-005B	PLUG ASSY	1	5PIN	
33	E406871-001	SPRING	2		
34	E406294-002	INSULATOR	4		
35	E307179-221	ELEVATOR BASE ASSY	1		

Printed Circuit Board Ass'y and Parts List

■ENN-367 □ Main & Front PC Board Ass'y

Note : ENN-367 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-367 [B]	Scandinavia Continental Europe
ENN-367 [A] BS	the U.K.
ENN-367 [C]	Germany

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q101	2SB1187(E,F)	SILICON	ROHM	
	Q102	2SC2060(Q,R)	SILICON	ROHM	
	Q103	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q104	2SA933S(R,S)	SILICON	ROHM	
	Q106	2SA933S(R,S)	SILICON	ROHM	
	Q107	2SA933S(R,S)	SILICON	ROHM	
	Q108	2SD2144S(VW)	SILICON	ROHM	
	Q109	2SD2144S(VW)	SILICON	ROHM	
	Q110	DTA114YS	SILICON	ROHM	
	Q111	2SC1740S(R,S)	SILICON	ROHM	
	Q112	2SA934(Q,R)	SILICON	ROHM	
	Q113	DTC144ES	SILICON	ROHM	
	Q114	DTC144ES	SILICON	ROHM	
	Q115	2SC1740S(R,S)	SILICON	ROHM	
	Q116	2SC1740S(R,S)	SILICON	ROHM	
	Q117	DTC144ES	SILICON	ROHM	
	Q201	DTA114YS	SILICON	ROHM	
	Q202	DTC114YS	SILICON	ROHM	
	Q203	DTC114YS	SILICON	ROHM	
	Q204	DTA114YS	SILICON	ROHM	
	Q303	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q304	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q601	2SD2037(E,F)	SILICON	ROHM	
	Q602	2SA934(Q,R)	SILICON	ROHM	
	Q603	2SD2037(E,F)	SILICON	ROHM	
	Q604	2SB1357(E,F)	SILICON	ROHM	
	Q605	DTC144ES	SILICON	ROHM	
	Q606	2SC1740S(R,S)	SILICON	ROHM	
	Q607	2SA934(Q,R)	SILICON	ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC201	HD404019RC09S	I.C.	HITACHI	
	IC202	MN1281(P,Q)	I.C.	MATSUSHITA	
	IC301	MN35500	I.C.	MATSUSHITA	
	IC303	VC4580L	I.C.	DAINICHI	
	IC304	VC4580L	I.C.	DAINICHI	
	IC307	M5218AL	I.C.	MITSUBISHI	
	IC401	CXD2500BQ	I.C.	1680	
	IC501	CXA1571S	I.C.	1680	
	IC601	CXA1372S	I.C.	1680	
	IC602	STA341M(A)	I.C.	SANKEN	
	IC603	M5218AL	I.C.	MITSUBISHI	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
⚠	D101	S1VB20F	SILICON	SINDENGEN	
	D102	MTZ5.6JB	ZENER	ROHM	
	D103	MTZ6.2JC	ZENER	ROHM	
	D104	1SR139-200	SILICON	ROHM	
	D105	1SR139-200	SILICON	ROHM	
	D106	1SR139-200	SILICON	ROHM	
	D107	MTZ33JC	ZENER	ROHM	
	D108	1SS133	SILICON	ROHM	
	D109	1SS133	SILICON	ROHM	
	D110	MTZ5.6JB	ZENER	ROHM	
	D201	1SS133	SILICON	ROHM	
	D202	1SS133	SILICON	ROHM	
	D203	SLH-56VC50F130	L.E.D.	ROHM	
	D210	1SS133	SILICON	ROHM	
	D601	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QFV81HJ-104	0.1MF	50V	T.FILM	
	C102	QFV81HJ-104	0.1MF	50V	T.FILM	
	C103	QETB1CM-338	3300MF	16V	ELECTRO	
	C104	QETB1CM-228	2200MF	16V	ELECTRO	
	C105	QETB1CM-227	220MF	16V	ELECTRO	
	C106	QETB1CM-227	220MF	16V	ELECTRO	
	C107	QETB1HM-225	2.2MF	50V	ELECTRO	
	C108	QETB1HM-225	2.2MF	50V	ELECTRO	
	C109	QETB0JM-227	220MF	6.3V	ELECTRO	
	C110	QETB1AM-476	47MF	10V	ELECTRO	
	C111	QETB1EM-107	100MF	25V	ELECTRO	
	C112	QCF21HP-223	0.022MF	50V	CERAMIC	
	C113	QETB1HM-107	100MF	50V	ELECTRO	
	C114	QETB1HM-475	4.7MF	50V	ELECTRO	
	C115	QETB1CM-227	220MF	16V	ELECTRO	
	C116	QETB1CM-226	22MF	16V	ELECTRO	
	C117	QETB1AM-107	100MF	10V	ELECTRO	
	C118	QETB1HM-225	2.2MF	50V	ELECTRO	
	C201	QER51HM-475	4.7MF	50V	ELECTRO	
	C202	QETB1HM-226	22MF	50V	ELECTRO	
	C204	QER50JM-107	100MF	6.3V	ELECTRO	
	C205	QCBB1HK-331	330PF	50V	CERAMIC	
	C206	QETB1HM-475	4.7MF	50V	ELECTRO	
	C207	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C208	QER51CM-476	47MF	16V	ELECTRO	
	C310	QCS21HJ-100	10PF	50V	CERAMIC	C
	C321	QFN81HJ-122	1200PF	50V	MYLAR	
	C322	QFN81HJ-122	1200PF	50V	MYLAR	
	C323	QCS21HJ-221	220PF	50V	CERAMIC	
	C324	QCS21HJ-221	220PF	50V	CERAMIC	
	C325	QFN81HJ-392	3900PF	50V	MYLAR	
	C326	QFN81HJ-392	3900PF	50V	MYLAR	
	C327	QCS21HJ-121	120PF	50V	CERAMIC	
	C328	QCS21HJ-121	120PF	50V	CERAMIC	
	C329	QETB1CM-226	22MF	16V	ELECTRO	
	C330	QETB1CM-226	22MF	16V	ELECTRO	
	C331	QFN81HJ-562	5600PF	50V	MYLAR	
	C332	QFN81HJ-562	5600PF	50V	MYLAR	
	C333	QFN81HJ-472	4700PF	50V	MYLAR	
	C334	QFN81HJ-472	4700PF	50V	MYLAR	
	C341	QETB1HM-475	4.7MF	50V	ELECTRO	
	C342	QETB1HM-475	4.7MF	50V	ELECTRO	
	C343	QCBB1HK-471	470PF	50V	CERAMIC	
	C344	QCBB1HK-471	470PF	50V	CERAMIC	
	C345	QETB1CM-476	47MF	16V	ELECTRO	
	C346	QETB1CM-476	47MF	16V	ELECTRO	
	C347	QCSB1HJ-100	10PF	50V	CERAMIC	ABS
	C347	QCSB1HJ-100	10PF	50V	CERAMIC	B
	C348	QCSB1HJ-100	10PF	50V	CERAMIC	ABS
	C348	QCSB1HJ-100	10PF	50V	CERAMIC	B
	C349	QCZ0202-155	1.5MF	25V	CERAMIC	C
	C350	QCSB1HJ-270	27PF	50V	CERAMIC	
	C351	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C352	QCT30CH-120	12PF	50V	CERAMIC	
	C353	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C354	QCZ0202-155	1.5MF	25V	CERAMIC	
	C355	QETB0JM-227	220MF	6.3V	ELECTRO	
	C356	QCZ0202-155	1.5MF	25V	CERAMIC	
	C357	QETB0JM-227	220MF	6.3V	ELECTRO	
	C358	QCZ0202-155	1.5MF	25V	CERAMIC	
	C359	QETB0JM-227	220MF	6.3V	ELECTRO	
	C361	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C362	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C367	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C368	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C372	QETB1CM-476	47MF	16V	ELECTRO	
	C373	QETB1CM-476	47MF	16V	ELECTRO	
	C376	QETB1CM-476	47MF	16V	ELECTRO	
	C377	QETB1CM-476	47MF	16V	ELECTRO	
	C380	QCF21HP-103	0.01MF	50V	CERAMIC	
	C381	QCF21HP-223	0.022MF	50V	CERAMIC	
	C382	QCF21HP-103	0.01MF	50V	CERAMIC	
	C383	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C397	QCS21HJ-100	10PF	50V	CERAMIC	C
	C398	QCS21HJ-100	10PF	50V	CERAMIC	C
	C401	QCZ0202-155	1.5MF	25V	CERAMIC	
	C402	QFN81HJ-473	0.047MF	50V	MYLAR	
	C403	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C404	QFN81HJ-152	1500PF	50V	MYLAR	
	C405	QCF21HP-102	1000PF	50V	CERAMIC	
	C406	QCZ0202-155	1.5MF	25V	CERAMIC	
	C502	QCS21HJ-100	10PF	50V	CERAMIC	
	C503	QCS21HJ-100	10PF	50V	CERAMIC	
	C504	QETB1AM-476	47MF	10V	ELECTRO	
	C505	QCS21HJ-820	82PF	50V	CERAMIC	
	C506	QCS21HJ-101	100PF	50V	CERAMIC	
	C507	QCZ0202-155	1.5MF	25V	CERAMIC	
	C508	QCZ0202-155	1.5MF	25V	CERAMIC	
	C509	QCS21HJ-220	22PF	50V	CERAMIC	
	C510	QETB1AM-107	100MF	10V	ELECTRO	
	C511	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C601	QFN81HJ-182	1800PF	50V	MYLAR	
	C603	QFN81HJ-222	2200PF	50V	MYLAR	
	C604	QFN81HJ-222	2200PF	50V	MYLAR	
	C605	QCHB1EZ-223	0.022MF	25V	CERAMIC	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C606	QFN81HJ-333	0.033MF 50V MYLAR	
	C607	QFN81HJ-103	0.01MF 50V MYLAR	
	C608	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C609	QFN81HJ-333	0.033MF 50V MYLAR	
	C610	QCZ0202-155	1.5MF 25V CERAMIC	
	C611	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C612	QFV81HJ-104	0.1MF 50V T.FILM	
	C613	QCS21HJ-471	470PF 50V CERAMIC	
	C614	QFN81HJ-104	0.1MF 50V MYLAR	
	C615	QFN81HJ-333	0.033MF 50V MYLAR	
	C616	QFN81HJ-473	0.047MF 50V MYLAR	
	C617	QFN81HJ-473	0.047MF 50V MYLAR	
	C618	QFN81HJ-473	0.047MF 50V MYLAR	
	C619	QETB1EM-106	10MF 25V ELECTRO	
	C620	QFN81HJ-104	0.1MF 50V MYLAR	
	C622	QCF21HP-223	0.022MF 50V CERAMIC	
	C623	QFN81HJ-333	0.033MF 50V MYLAR	
	C624	QETB1EM-106	10MF 25V ELECTRO	
	C626	QFN81HJ-183	0.018MF 50V MYLAR	
	C627	QFN81HJ-103	0.01MF 50V MYLAR	
	C628	QETB1HM-475	4.7MF 50V ELECTRO	
	C629	QFN81HJ-393	0.039MF 50V MYLAR	
	C630	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C631	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C701	QCBB1HK-101	100PF 50V CERAMIC	
	C703	QCSB1HJ-180	18PF 50V CERAMIC	
	C951	QCZ0202-155	1.5MF 25V CERAMIC	
	C953	QCS21HJ-180	18PF 50V CERAMIC	
	C955	QCF21HP-472	4700PF 50V CERAMIC	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R101	PTH8L07BB2R2N1B	POSITIVE T HE	
	R102	PTH8L07BB2R2N1B	POSITIVE T HE	
	R103	QRD167J-104	100K 1/6W CARBON	
	R104	QRD167J-104	100K 1/6W CARBON	
	R105	QRD167J-222	2.2K 1/6W CARBON	
	R106	QRD167J-222	2.2K 1/6W CARBON	
	R107	QRD161J-221	220 1/6W CARBON	
	R108	QRD161J-221	220 1/6W CARBON	
	R109	QRD161J-221	220 1/6W CARBON	
	R110	QRD161J-221	220 1/6W CARBON	
⚠	R112	QRZ0077-100	10 1/4W FUSIBLE	
	R113	QRD167J-821	820 1/6W CARBON	
	R114	QRD167J-202	2K 1/6W CARBON	
	R115	QRD167J-472	4.7K 1/6W CARBON	
⚠	R116	QRZ0077-560	56 1/4W FUSIBLE	
	R117	QRD167J-202	2K 1/6W CARBON	
	R118	QRD167J-121	120 1/6W CARBON	
	R119	QRD167J-152	1.5K 1/6W CARBON	
	R120	QRD167J-152	1.5K 1/6W CARBON	
	R121	QRD161J-221	220 1/6W CARBON	
	R122	QRD161J-221	220 1/6W CARBON	
	R123	QRD167J-822	8.2K 1/6W CARBON	
	R124	QRD167J-683	68K 1/6W CARBON	
	R125	QRD161J-221	220 1/6W CARBON	
	R126	QRD167J-103	10K 1/6W CARBON	
	R127	QRD167J-103	10K 1/6W CARBON	
	R128	QRD167J-222	2.2K 1/6W CARBON	
	R129	QRD161J-221	220 1/6W CARBON	
	R130	QRD161J-221	220 1/6W CARBON	
	R131	QRD167J-222	2.2K 1/6W CARBON	
	R141	QRD167J-102	1K 1/6W CARBON	
	R201	QRD167J-821	820 1/6W CARBON	
	R202	QRD167J-103	10K 1/6W CARBON	
	R203	QRD167J-105	1M 1/6W CARBON	
	R204	QRD167J-472	4.7K 1/6W CARBON	
	R205	QRD167J-103	10K 1/6W CARBON	
	R206	QRD167J-473	47K 1/6W CARBON	
	R207	QRD161J-221	220 1/6W CARBON	
	R210	QRD167J-103	10K 1/6W CARBON	
	R301	QRD167J-560	56 1/6W CARBON	
	R302	QRD167J-330	33 1/6W CARBON	
⚠	R303	QRV144F-1802	18K 1/4W M.FILM	
⚠	R304	QRV144F-1802	18K 1/4W M.FILM	
⚠	R305	QRV144F-1802	18K 1/4W M.FILM	
⚠	R306	QRV144F-1802	18K 1/4W M.FILM	
	R307	QRD167J-271	270 1/6W CARBON	
	R308	QRD167J-182	1.8K 1/6W CARBON	
	R309	QRD167J-560	56 1/6W CARBON	
	R310	QRD167J-271	270 1/6W CARBON	
⚠	R311	QRV144F-1802	18K 1/4W M.FILM	
⚠	R312	QRV144F-1802	18K 1/4W M.FILM	
⚠	R313	QRV144F-1802	18K 1/4W M.FILM	
⚠	R314	QRV144F-1802	18K 1/4W M.FILM	
	R315	QRD167J-182	1.8K 1/6W CARBON	
	R316	QRD167J-271	270 1/6W CARBON	
	R326	QRD167J-182	1.8K 1/6W CARBON	
	R327	QRD167J-182	1.8K 1/6W CARBON	
	R328	QRD167J-182	1.8K 1/6W CARBON	
	R329	QRD167J-182	1.8K 1/6W CARBON	
	R330	QRD167J-123	12K 1/6W CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R331	QRD167J-123	12K 1/6W CARBON	
	R332	QRD167J-123	12K 1/6W CARBON	
	R333	QRD167J-123	12K 1/6W CARBON	
	R334	QRD167J-123	12K 1/6W CARBON	
	R335	QRD167J-123	12K 1/6W CARBON	
	R336	QRD167J-272	2.7K 1/6W CARBON	
	R337	QRD167J-272	2.7K 1/6W CARBON	
	R338	QRD167J-472	4.7K 1/6W CARBON	
	R339	QRD167J-472	4.7K 1/6W CARBON	
	R340	QRD167J-331	330 1/6W CARBON	
	R341	QRD167J-331	330 1/6W CARBON	
	R342	QRD167J-273	27K 1/6W CARBON	
	R343	QRD167J-273	27K 1/6W CARBON	
	R344	QRD167J-331	330 1/6W CARBON	
	R345	QRD167J-331	330 1/6W CARBON	
	R346	QRD167J-103	10K 1/6W CARBON	
	R347	QRD167J-103	10K 1/6W CARBON	
	R348	QRD167J-151	150 1/6W CARBON	
	R349	QRD167J-151	150 1/6W CARBON	
	R357	QRD167J-183	18K 1/6W CARBON	
	R358	QRD167J-183	18K 1/6W CARBON	
	R359	QRD167J-473	47K 1/6W CARBON	
	R360	QRD167J-473	47K 1/6W CARBON	
	R361	QRD167J-103	10K 1/6W CARBON	
	R362	QRD167J-103	10K 1/6W CARBON	
	R363	QRD167J-103	10K 1/6W CARBON	
	R364	QRD167J-103	10K 1/6W CARBON	
	R365	QRD167J-562	5.6K 1/6W CARBON	
	R366	QRD167J-562	5.6K 1/6W CARBON	
	R367	QRD167J-271	270 1/6W CARBON	
	R368	QRD167J-271	270 1/6W CARBON	
	R369	QRD167J-680	68 1/6W CARBON	
	R371	QRD167J-390	39 1/6W CARBON	
	R372	QRD167J-390	39 1/6W CARBON	
	R373	QRD167J-271	270 1/6W CARBON	
	R374	QRD167J-271	270 1/6W CARBON	
	R375	QRD167J-680	68 1/6W CARBON	
	R376	QRD167J-102	1K 1/6W CARBON	ABS
	R376	QRD167J-102	1K 1/6W CARBON	B
	R377	QRD167J-102	1K 1/6W CARBON	ABS
	R377	QRD167J-102	1K 1/6W CARBON	B
	R378	QRD167J-151	150 1/6W CARBON	
	R379	QRD167J-151	150 1/6W CARBON	
	R380	QRD167J-121	120 1/6W CARBON	ABS
	R380	QRD167J-121	120 1/6W CARBON	B
	R380	QRD161J-221	220 1/6W CARBON	C
	R381	QRD167J-102	1K 1/6W CARBON	ABS
	R381	QRD167J-102	1K 1/6W CARBON	B
	R381	QRD167J-122	1.2K 1/6W CARBON	C
	R382	QRD167J-155	1.5M 1/6W CARBON	
	R383	QRD167J-560	56 1/6W CARBON	
	R391	QRD167J-103	10K 1/6W CARBON	
	R397	QRD167J-102	1K 1/6W CARBON	C
	R398	QRD167J-102	1K 1/6W CARBON	C
	R399	QRD167J-105	1M 1/6W CARBON	
	R401	QRD167J-682	6.8K 1/6W CARBON	
	R402	QRD167J-332	3.3K 1/6W CARBON	
	R403	QRD167J-103	10K 1/6W CARBON	
	R404	QRD167J-113	11K 1/6W CARBON	
	R405	QRD167J-102	1K 1/6W CARBON	
	R406	QRD167J-102	1K 1/6W CARBON	
	R407	QRD167J-102	1K 1/6W CARBON	
	R411	QRD167J-103	10K 1/6W CARBON	
	R412	QRD167J-103	10K 1/6W CARBON	
	R413	QRD167J-103	10K 1/6W CARBON	
	R414	QRD167J-103	10K 1/6W CARBON	
	R415	QRD167J-103	10K 1/6W CARBON	
	R416	QRD167J-272	2.7K 1/6W CARBON	
	R501	QRD167J-102	1K 1/6W CARBON	
	R502	QRD167J-220	22 1/6W CARBON	
	R503	QRD167J-220	22 1/6W CARBON	
	R504	QRD167J-183	18K 1/6W CARBON	
	R505	QRD167J-183	18K 1/6W CARBON	
	R506	QRD167J-121	120 1/6W CARBON	
	R507	QRD167J-103	10K 1/6W CARBON	
	R508	QRD167J-332	3.3K 1/6W CARBON	
	R509	QRD167J-822	8.2K 1/6W CARBON	
	R510	QRD167J-113	11K 1/6W CARBON	
	R511	QRD167J-104	100K 1/6W CARBON	
	R512	QVPA601-203A	20K VARIABLE	
	R513	QVPA601-203A	20K VARIABLE	
	R514	QRD167J-103	10K 1/6W CARBON	
	R515	QRD167J-910	91 1/6W CARBON	
	R601	QRD167J-472	4.7K 1/6W CARBON	
	R602	QRD167J-472	4.7K 1/6W CARBON	
	R603	QVPA601-203A	20K VARIABLE	
	R604	QVPA601-203A	20K VARIABLE	
	R605	QRD167J-102	1K 1/6W CARBON	
	R606	QRD167J-104	100K 1/6W CARBON	
	R607	QRD167J-103	10K 1/6W CARBON	
	R608	QRD167J-183	18K 1/6W CARBON	
	R609	QRD167J-183	18K 1/6W CARBON	
	R610	QRD167J-224	220K 1/6W CARBON	
	R611	QRD167J-2R2	2.2 1/6W CARBON	
	R612	QRD167J-164	160K 1/6W CARBON	

⚠ : SAFETY PARTS

-V164BK

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R613	QRD167J-134	130K	1/6W	CARBON	
	R614	QRD167J-2R2	2.2	1/6W	CARBON	
	R615	QRD167J-224	220K	1/6W	CARBON	
	R616	QRD167J-333	33K	1/6W	CARBON	
	R617	QRD167J-103	10K	1/6W	CARBON	
	R618	QRD167J-514	510K	1/6W	CARBON	
	R619	QRD167J-2R2	2.2	1/6W	CARBON	
	R620	QRD167J-203	20K	1/6W	CARBON	
	R621	QRD167J-513	51K	1/6W	CARBON	
	R622	QRD167J-124	120K	1/6W	CARBON	
	R623	QRD167J-472	4.7K	1/6W	CARBON	
	R626	QRD167J-203	20K	1/6W	CARBON	
	R627	QRD167J-273	27K	1/6W	CARBON	
	R628	QRD167J-752	7.5K	1/6W	CARBON	
	R629	QRD167J-752	7.5K	1/6W	CARBON	
	R630	QRD167J-333	33K	1/6W	CARBON	
	R631	QRD167J-2R2	2.2	1/6W	CARBON	
	R632	QRD167J-473	47K	1/6W	CARBON	
	R633	QRD167J-513	51K	1/6W	CARBON	
	R634	QRD167J-683	68K	1/6W	CARBON	
	R635	QRD167J-683	68K	1/6W	CARBON	
	R636	QRD167J-684	680K	1/6W	CARBON	
	R637	QRD161J-221	220	1/6W	CARBON	
	R638	QRD167J-823	82K	1/6W	CARBON	
	R701	QRD167J-471	470	1/6W	CARBON	
	RA201	QRB045J-473	47K	1/8W	R.NETWORK	
	VR351	QVAB79C-E53EJ5	5K		VARIABLE	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E306805-010	SPACER	
		E306951-222SS	FL.HOLDER	
		E70306-001	HEAT SINK	
		E70859-001	EARTH PLATE	
		E75464-001	EARTH PLATE	
		SBSG3008Z	SCREW	
		EMW10314-004BS		ABS
		EMW10314-004		B
		EMW10314-004		C
		E3400-431	FELT SPACER	C
	J201	EMV7123-031R	CONNECTOR(31PIN)	
	J301	EMN00TV-214AJ4	2P PIN JACK	
	J302	QMS6302-131	HEADPHONE JACK	
	J401	EMV7123-031	CONNECTOR(31PIN)	
	J601	EMV7144-015	CONNECTOR(15PIN)	
	J701	QMS3501-020J4	MINI JACK	
	L301	EQL4004-1R0	INDUCTOR	
	L701	EQL4004-1R0	INDUCTOR	
	P101	QMCB001-E02HBS	AC SOCKET	ABS
	P101	QMCB001-E02H	AC SOCKET	B
	P101	QMCB001-E02H	AC SOCKET	C
	P501	EMV5109-006A	PLUG ASSY	
	P502	EMV5109-005A	PLUG ASSY	
	X201	ECX0004-194KM	RESONATOR	
	X301	ECX0169-344EYJ1	RESONATOR	
⚠	CP101	ICP-N15	I.C. PROTECTOR	
	FL201	ELU0001-114	FL TUBE	
	FW201	VWS103-214K4K	FLAT WIRE ASSY	
	FW202	VWS108-204K4K	FLAT WIRE	
	FW203	EWR33B-10SST	FLAT WIRE	
	SW201	QSQ1001-E01ZJ7	PUSH SWITCH (1)	
	SW202	QSQ1001-E01ZJ7	PUSH SWITCH (2)	
	SW203	QSQ1001-E01ZJ7	PUSH SWITCH (3)	
	SW204	QSQ1001-E01ZJ7	PUSH SWITCH (4)	
	SW205	QSQ1001-E01ZJ7	PUSH SWITCH (5)	
	SW206	QSQ1001-E01ZJ7	PUSH SWITCH (6)	
	SW207	QSQ1001-E01ZJ7	PUSH SWITCH (7)	
	SW208	QSQ1001-E01ZJ7	PUSH SWITCH (8)	
	SW209	QSQ1001-E01ZJ7	PUSH SWITCH (9)	
	SW210	QSQ1001-E01ZJ7	PUSH SWITCH (10)	
	SW211	QSQ1001-E01ZJ7	PUSH SWITCH (OPEN/CLOSE)	
	SW212	QSQ1001-E01ZJ7	PUSH SWITCH (BACKWARD SCAN)	
	SW213	QSQ1001-E01ZJ7	PUSH SWITCH (FORWARD SCAN)	
	SW214	QSQ1001-E01ZJ7	PUSH SWITCH (BACKWARD SKIP)	
	SW215	QSQ1001-E01ZJ7	PUSH SWITCH (FORWARD SKIP)	
	SW216	QSQ1001-E01ZJ7	PUSH SWITCH (+10)	
	SW217	QSQ1001-E01ZJ7	PUSH SWITCH (PLAY/PAUSE)	
	SW218	QSQ1001-E01ZJ7	PUSH SWITCH (RANDOM)	
	SW219	QSQ1001-E01ZJ7	PUSH SWITCH (REPEAT ALL/1)	
	SW220	QSQ1001-E01ZJ7	PUSH SWITCH (POWER)	
	SW221	QSQ1001-E01ZJ7	PUSH SWITCH (DDRP/ONE TOUCH REC)	
	SW222	QSQ1001-E01ZJ7	PUSH SWITCH (SIDE A/B)	
	SW223	QSQ1001-E01ZJ7	PUSH SWITCH (EDITING)	
	SW224	QSQ1001-E01ZJ7	PUSH SWITCH (PROGRAM)	
	SW225	QSQ1001-E01ZJ7	PUSH SWITCH (CANCEL)	
	SW226	QSQ1001-E01ZJ7	PUSH SWITCH (STOP)	

⚠ : SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Area
	E30580-1922A	INSTRUCTION BOOK	1		EN
	E30580-1921B	INSTRUCTION BOOK	1		EF
	E30580-1920ABS	INSTRUCTION BOOK	1		BS
	E30580-1921B	INSTRUCTION BOOK	1		G
⚠	QMP39F0-183	POWER CORD	1		EN
⚠	QMP39F0-183	POWER CORD	1		EF
⚠	QMP5520-1835BS	POWER CORD	1		BS
⚠	QMP39F0-183	POWER CORD	1		G
	QPGA025-03505B	ENVELOPE	1		BS
	EWP302-011	SIGNAL CORD	1		
	EWP805-001	SIGNAL CORD	1		
	E43486-340A	SAFETY SHEET	1		BS
	BT20060	WARRANTY CARD	1		BS
	BT-20066A	WARRANTY CARD	1		BS
	BT-20134	WARRANTY CARD	1		G
	QPGA025-03505B	ENVELOPE	1		

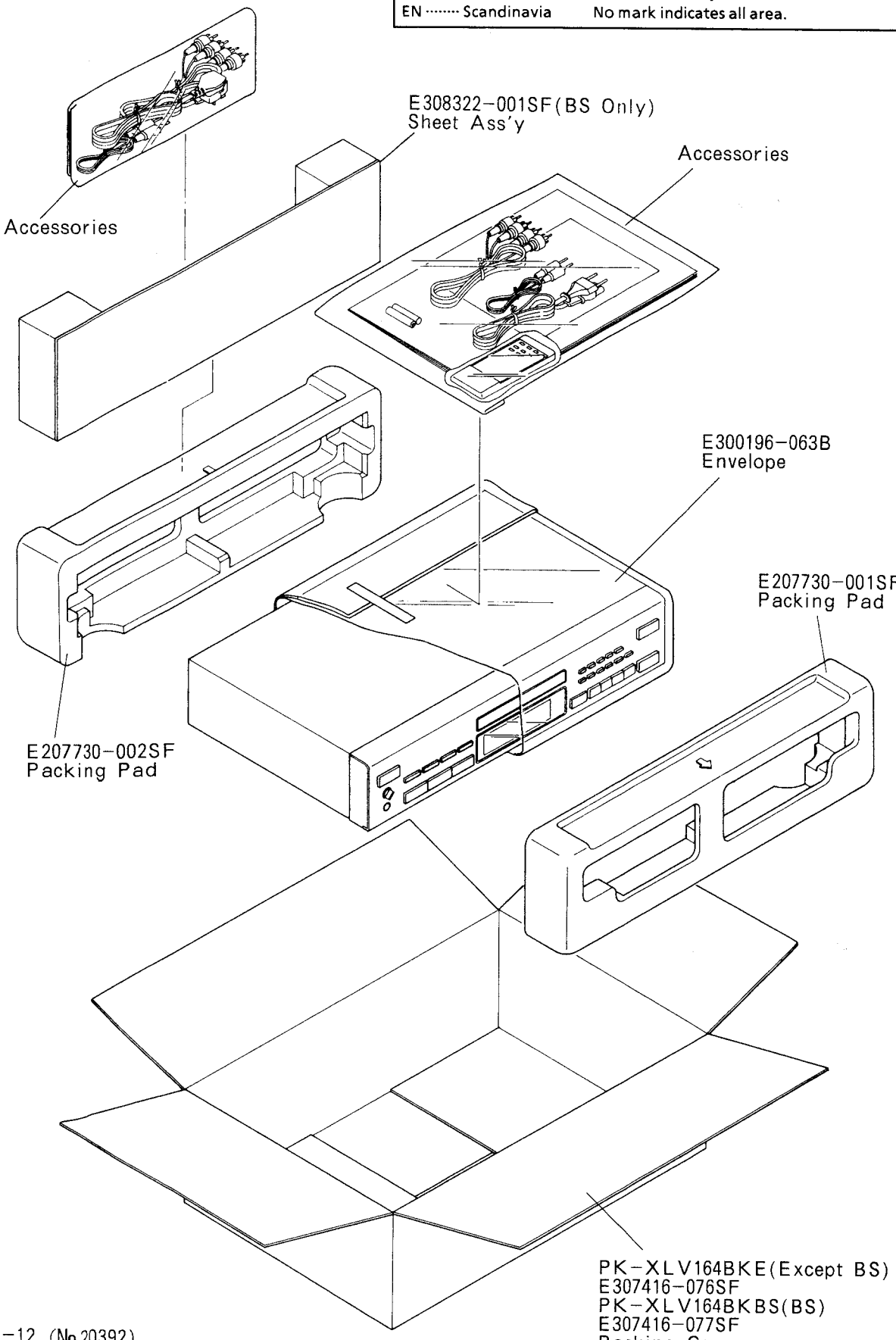
⚠ : Safety Parts

The Marks for Designated Areas

BS .... the U.K
G ..... Germany
EF .... Continental Europe
EN .... Scandinavia
No mark indicates all area.

Packing Materials and Part Numbers

The Marks for Designated Areas		
BS ····· the U.K	G ····· Germany	EF ····· Continental Europe
EN ····· Scandinavia	No mark indicates all area.	



PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

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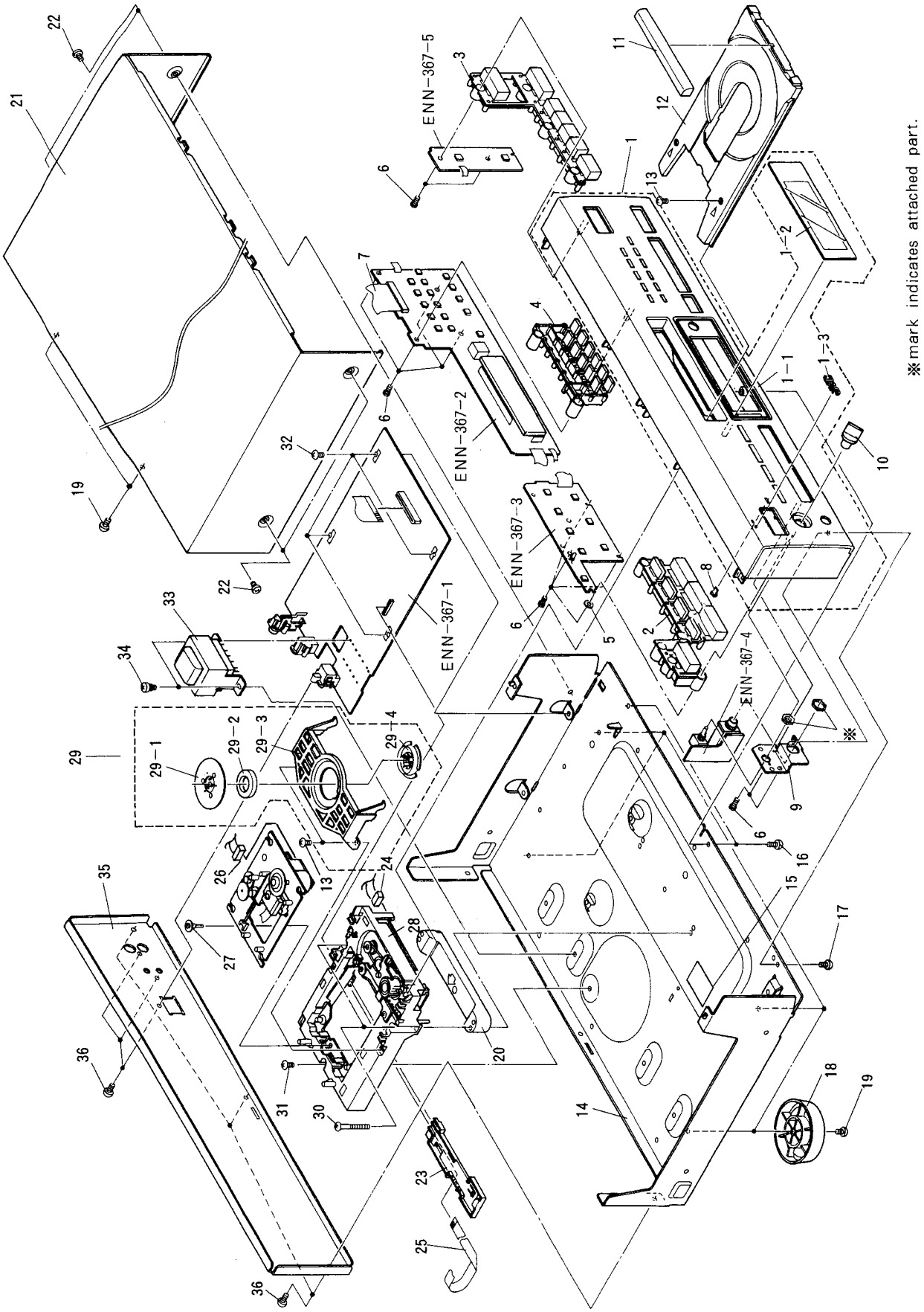
-V264BK

General Exploded View and Parts List



■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLV264BKE(S	FRONT PANEL	1		
	1-1	E102657-010SF	FRONT PANEL	1		
	1-2	E308327-008SF	WINDOW SCREEN	1		
	1-3	VJD5429-001	JVC MARK	1		
	2	FSXP2002-010SS	POWER BTTON	1		
	3	FSXP2003-010SS	OPEN BTTON	1		
	4	FSXP2004-002	PUSH BUTTON	1		
	5	E407612-001	WASHER	1		
	6	SDSF2608Z	SCREW	14		
	7	EWR131K-10TTJ3	FLAT WIRE	1		
	8	FSJD4001-001	POWER INDICATOR	1		
	9	E407416-001SF	HEADPHONE BRACKET	1		
	10	E74179-009	VOLUME KNOB	1		
	11	FSJC3002-006SS	FITTING	1		
	12	E102358-002SF	CD TRAY	1		
	13	SBSF3008M	SCREW	3		
	14	E102355-221SF	CHASSIS BASE	1		
	15	E406507-001	CAUTION LABEL	1		
	16	SDSF3008M	SCREW	2		
	17	SBSG3008M	SCREW	1		
	18	E406282-005SF	FOOT ASSY	4		
	19	SBST3008M	SCREW	6		
	20	E307158-003SS	STAND	1		
	21	E206906-223	METAL COVER	1		
	22	E406308-001	SPECIAL SCREW	4		
	23	E308181-221SS	FFC HOLDER	1		
	24	EWS265-B408	SOCKET WIRE	1		
	25	EWPZ02-003	FFC CABLE	1		
	26	EWS266-B410	SOCKET WIRE	1		
	27	E406293-002	SPECIAL SCREW	1		
	28	----------	CD MECHANISM UNIT ASSY	1	See page 3-5	
	29-1	E306836-223SS	YOKE PLATE	1		
	29-2	E74897-002	MAGNET	2		
	29-3	E26756-331SF	CLAMPER BASE	1		
	29-4	E306835-221SS	CD CLAMPER	1		
	30	SBST3025Z	SCREW	2		
	31	SBST3008Z	SCREW	1		
	32	SBSG3008CC	SCREW	4		
⚠	33	ETP1000-74EAJBS	POWER TRANSFORMER	1		BS
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		EF
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		EN
⚠	33	ETP1000-74EAJ	POWER TRANSFORMER	1		G
	34	E65389-002	SPECIAL SCREW	2	FOR TRANS FORMER	
	35	E206904-224SF	REAR PANEL	1		
	-	E308453-012	RATING LABEL	1		EN
	-	E308453-012	RATING LABEL	1		EF
	-	E308453-013F	RATING LABEL	1		G
	36	E73273-006	SPECIAL SCREW	6	FOR JACKS	
	-	E61029-005	NUMBER LABEL	1		
	-	E406507-001	CAUTION LABEL	1		

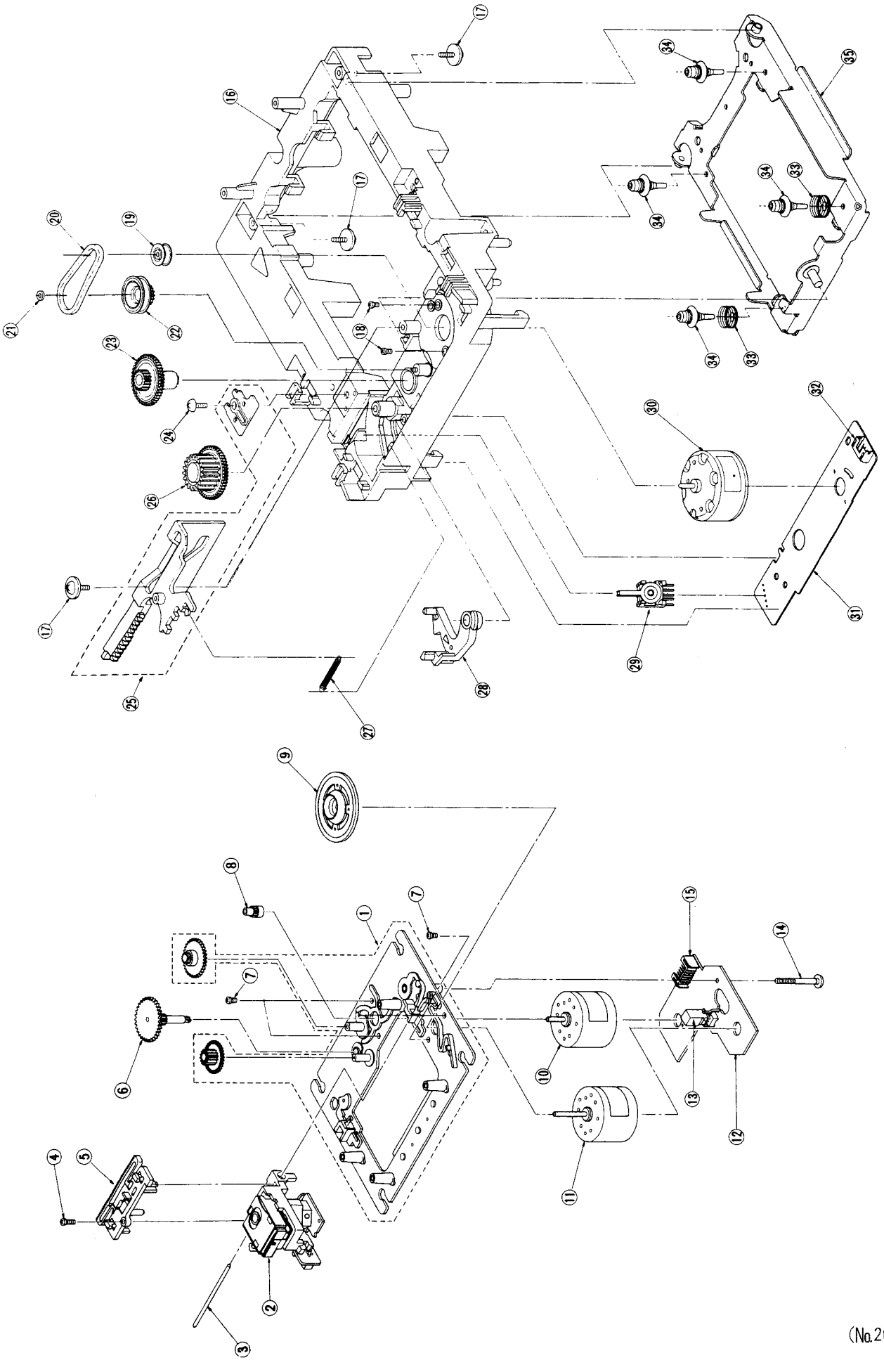
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	-	E70891-001	CLASS 1 LABEL	1		
	-	QZL1031-101	LABEL	1		EF
	-	E70027-001	LABEL	1		EN
	-	E70419-002F	F.MARK LABEL	1		G

⚠ : Safety Parts

The Marks for Designated Areas

BS .... the U.K
EN .... Scandinavia
G ..... Germany
No mark indicates all area.
EF .... Continental Europe

CD Mechanism Ass'y and Parts List



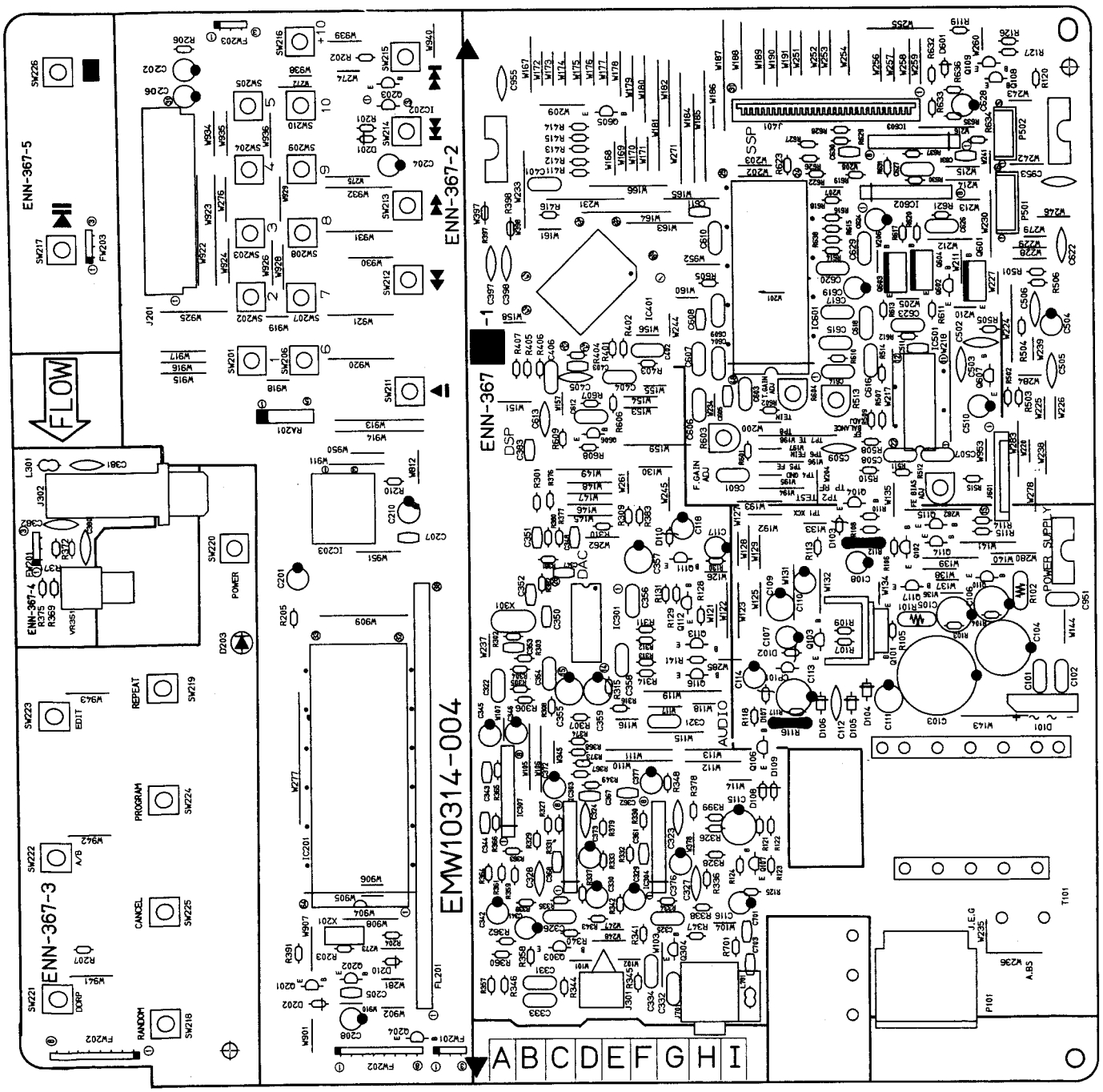
■ Parts List (CD Mechanism Ass'y)

Item	Part Number	Part Name	Q'ty	Description	Area
1	EPB-002A	MECHANISM BASE ASSY	1		
2	OPTIMA-6S	PICK UP ASS'Y	1		
3	E406777-001	SHAFT	1		
4	SDSF2006Z	SCREW	1		
5	E307746-001	CD RACK	1		
6	EPB-003A	MECHANISM BASE ASSY	1		
7	SDSP2003N	SCREW	4		
8	E406750-001	PINION GEAR	1		
9	EPB-001C	TURNTABLE	1		
10	E406784-001	DC MOTOR	1		
11	E406783-001	DC MOTOR	1		
12	EMW10190-001(S)	CIRCUIT BOARD	1		
13	ESB1100-005	LEAF SWITCH	1		
14	E75832-001	SPECIAL SCREW	1		
15	EMV5109-006B	PLUG ASSY	1	6PIN	
16	E102357-221	LOADING BASE	1		
17	E65923-003	SCREW	3		
18	SPSK2640Z	SCREW	2		
19	E75984-001	MOTOR PULLEY	1		
20	E75950-002	BELT	1		
21	E72024-001	SPEED NUT	1		
22	E75985-001	GEAR	1		
23	E75986-002	GEAR	1		
24	SBSF3008Z	SCREW	1		
25	E307252-221	CAM - PLATE	1		
26	E75987-001	REEL GEAR	1		
27	E75989-001	SPRING	1		
28	E307162-221	LEVER	1		
29	ESS1200-002	SLIDE SWITCH	1		
30	RF-500TB-12560	MOTOR	1		
31	EMW10255-002(S)	CIRCUIT BOARD	1		
32	EMV5109-005B	PLUG ASSY	1	5PIN	
33	E406871-001	SPRING	2		
34	E406294-002	INSULATOR	4		
35	E307179-221	ELEVATOR BASE ASSY	1		

Printed Circuit Board Ass'y and Parts List

■ENN-367 ☐ Main & Front PC Board Ass'y

Note : ENN-367 ☐ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-367 [E]	Scandinavia Continental Europe
ENN-367 [D] BS	the U.K.
ENN-367 [F]	Germany

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q101	2SB1187(E,F)	SILICON	ROHM	
	Q102	2SC2060(Q,R)	SILICON	ROHM	
	Q103	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q104	2SA933S(R,S)	SILICON	ROHM	
	Q106	2SA933S(R,S)	SILICON	ROHM	
	Q107	2SA933S(R,S)	SILICON	ROHM	
	Q108	2SD2144S(VW)	SILICON	ROHM	
	Q109	2SD2144S(VW)	SILICON	ROHM	
	Q110	DTA114YS	SILICON	ROHM	
	Q111	2SC1740S(R,S)	SILICON	ROHM	
	Q112	2SA934(Q,R)	SILICON	ROHM	
	Q113	DTC144ES	SILICON	ROHM	
	Q114	DTC144ES	SILICON	ROHM	
	Q115	2SC1740S(R,S)	SILICON	ROHM	
	Q116	2SC1740S(R,S)	SILICON	ROHM	
	Q117	DTC144ES	SILICON	ROHM	
	Q201	DTA114YS	SILICON	ROHM	
	Q202	DTC114YS	SILICON	ROHM	
	Q203	DTC114YS	SILICON	ROHM	
	Q204	DTA114YS	SILICON	ROHM	
	Q303	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q304	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q601	2SD2037(E,F)	SILICON	ROHM	
	Q602	2SA934(Q,R)	SILICON	ROHM	
	Q603	2SD2037(E,F)	SILICON	ROHM	
	Q604	2SB1357(E,F)	SILICON	ROHM	
	Q605	DTC144ES	SILICON	ROHM	
	Q606	2SC1740S(R,S)	SILICON	ROHM	
	Q607	2SA934(Q,R)	SILICON	ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC201	HD404019RC09S	I.C.	HITACHI	
	IC202	MN1281(P,Q)	I.C.	MATSUSHITA	
	IC203	SPS-420-1	I.C.	SANYO	
	IC301	MN35500	I.C.	MATSUSHITA	
	IC303	VC4580L	I.C.	DAINICHI	
	IC304	VC4580L	I.C.	DAINICHI	
	IC307	M5218AL	I.C.	MITSUBISHI	
	IC401	CXD2500BQ	I.C.	1680	
	IC501	CXA1571S	I.C.	1680	
	IC601	CXA1372S	I.C.	1680	
	IC602	STA341M(A)	I.C.	SANKEN	
	IC603	M5218AL	I.C.	MITSUBISHI	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
⚠	D101	S1VB20F	SILICON	SINDENGEN	
	D102	MTZ5.6JB	ZENER	ROHM	
	D103	MTZ6.2JC	ZENER	ROHM	
	D104	1SR139-200	SILICON	ROHM	
	D105	1SR139-200	SILICON	ROHM	
	D106	1SR139-200	SILICON	ROHM	
	D107	MTZ33JC	ZENER	ROHM	
	D108	1SS133	SILICON	ROHM	
	D109	1SS133	SILICON	ROHM	
	D110	MTZ5.6JB	ZENER	ROHM	
	D201	1SS133	SILICON	ROHM	
	D202	1SS133	SILICON	ROHM	
	D203	SLH-56VC50F130	L.E.D.	ROHM	
	D210	1SS133	SILICON	ROHM	
	D601	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QFV81HJ-104	0.1MF	50V	T.FILM	
	C102	QFV81HJ-104	0.1MF	50V	T.FILM	
	C103	QETB1CM-338	3300MF	16V	ELECTRO	
	C104	QETB1CM-228	2200MF	16V	ELECTRO	
	C105	QETB1CM-227	220MF	16V	ELECTRO	
	C106	QETB1CM-227	220MF	16V	ELECTRO	
	C107	QETB1HM-225	2.2MF	50V	ELECTRO	
	C108	QETB1HM-225	2.2MF	50V	ELECTRO	
	C109	QETB0JM-227	220MF	6.3V	ELECTRO	
	C110	QETB1AM-476	47MF	10V	ELECTRO	
	C111	QETB1EM-107	100MF	25V	ELECTRO	
	C112	QCF21HP-223	0.022MF	50V	CERAMIC	
	C113	QETB1HM-107	100MF	50V	ELECTRO	
	C114	QETB1HM-475	4.7MF	50V	ELECTRO	
	C115	QETB1CM-227	220MF	16V	ELECTRO	
	C116	QETB1CM-226	22MF	16V	ELECTRO	
	C117	QETB1AM-107	100MF	10V	ELECTRO	
	C118	QETB1HM-225	2.2MF	50V	ELECTRO	
	C201	QER51HM-475	4.7MF	50V	ELECTRO	
	C202	QETB1HM-226	22MF	50V	ELECTRO	
	C204	QER50JM-107	100MF	6.3V	ELECTRO	
	C205	QCBB1HK-331	330PF	50V	CERAMIC	
	C206	QETB1HM-475	4.7MF	50V	ELECTRO	
	C207	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C208	QER51CM-476	47MF	16V	ELECTRO	
	C210	QER51CM-476	47MF	16V	ELECTRO	
	C310	QCS21HJ-100	10PF	50V	CERAMIC	F
	C321	QFN81HJ-122	1200PF	50V	MYLAR	
	C322	QFN81HJ-122	1200PF	50V	MYLAR	
	C323	QCS21HJ-221	220PF	50V	CERAMIC	
	C324	QCS21HJ-221	220PF	50V	CERAMIC	
	C325	QFN81HJ-392	3900PF	50V	MYLAR	
	C326	QFN81HJ-392	3900PF	50V	MYLAR	
	C327	QCS21HJ-121	120PF	50V	CERAMIC	
	C328	QCS21HJ-121	120PF	50V	CERAMIC	
	C329	QETB1CM-226	22MF	16V	ELECTRO	
	C330	QETB1CM-226	22MF	16V	ELECTRO	
	C331	QFN81HJ-562	5600PF	50V	MYLAR	
	C332	QFN81HJ-562	5600PF	50V	MYLAR	
	C333	QFN81HJ-472	4700PF	50V	MYLAR	
	C334	QFN81HJ-472	4700PF	50V	MYLAR	
	C341	QETB1HM-475	4.7MF	50V	ELECTRO	
	C342	QETB1HM-475	4.7MF	50V	ELECTRO	
	C343	QCBB1HK-471	470PF	50V	CERAMIC	
	C344	QCBB1HK-471	470PF	50V	CERAMIC	
	C345	QETB1CM-476	47MF	16V	ELECTRO	
	C346	QETB1CM-476	47MF	16V	ELECTRO	
	C347	QCSB1HJ-100	10PF	50V	CERAMIC	DBS
	C347	QCSB1HJ-100	10PF	50V	CERAMIC	E
	C348	QCSB1HJ-100	10PF	50V	CERAMIC	DBS
	C348	QCSB1HJ-100	10PF	50V	CERAMIC	E
	C349	QCZ0202-155	1.5MF	25V	CERAMIC	F
	C350	QCSB1HJ-270	27PF	50V	CERAMIC	
	C351	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C352	QCT30CH-120	12PF	50V	CERAMIC	
	C353	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C354	QCZ0202-155	1.5MF	25V	CERAMIC	
	C355	QETB0JM-227	220MF	6.3V	ELECTRO	
	C356	QCZ0202-155	1.5MF	25V	CERAMIC	
	C357	QETB0JM-227	220MF	6.3V	ELECTRO	
	C358	QCZ0202-155	1.5MF	25V	CERAMIC	
	C359	QETB0JM-227	220MF	6.3V	ELECTRO	
	C361	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C362	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C367	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C368	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C372	QETB1CM-476	47MF	16V	ELECTRO	
	C373	QETB1CM-476	47MF	16V	ELECTRO	
	C376	QETB1CM-476	47MF	16V	ELECTRO	
	C377	QETB1CM-476	47MF	16V	ELECTRO	
	C380	QCF21HP-103	0.01MF	50V	CERAMIC	
	C381	QCF21HP-223	0.022MF	50V	CERAMIC	
	C382	QCF21HP-103	0.01MF	50V	CERAMIC	
	C383	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C397	QCS21HJ-100	10PF	50V	CERAMIC	F
	C398	QCS21HJ-100	10PF	50V	CERAMIC	F
	C401	QCZ0202-155	1.5MF	25V	CERAMIC	
	C402	QFN81HJ-473	0.047MF	50V	MYLAR	
	C403	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C404	QFN81HJ-152	1500PF	50V	MYLAR	
	C405	QCF21HP-102	1000PF	50V	CERAMIC	
	C406	QCZ0202-155	1.5MF	25V	CERAMIC	
	C502	QCS21HJ-100	10PF	50V	CERAMIC	
	C503	QCS21HJ-100	10PF	50V	CERAMIC	
	C504	QETB1AM-476	47MF	10V	ELECTRO	
	C505	QCS21HJ-820	82PF	50V	CERAMIC	
	C506	QCS21HJ-101	100PF	50V	CERAMIC	
	C507	QCZ0202-155	1.5MF	25V	CERAMIC	
	C508	QCZ0202-155	1.5MF	25V	CERAMIC	
	C509	QCS21HJ-220	22PF	50V	CERAMIC	
	C510	QETB1AM-107	100MF	10V	ELECTRO	
	C511	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C601	QFN81HJ-182	1800PF	50V	MYLAR	
	C603	QFN81HJ-222	2200PF	50V	MYLAR	
	C604	QFN81HJ-222	2200PF	50V	MYLAR	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C605	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C606	QFN81HJ-333	0.033MF 50V MYLAR	
	C607	QFN81HJ-103	0.01MF 50V MYLAR	
	C608	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C609	QFN81HJ-333	0.033MF 50V MYLAR	
	C610	QCZ0202-155	1.5MF 25V CERAMIC	
	C611	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C612	QFV81HJ-104	0.1MF 50V T.FILM	
	C613	QCS21HJ-471	470PF 50V CERAMIC	
	C614	QFN81HJ-104	0.1MF 50V MYLAR	
	C615	QFN81HJ-333	0.033MF 50V MYLAR	
	C616	QFN81HJ-473	0.047MF 50V MYLAR	
	C617	QFN81HJ-473	0.047MF 50V MYLAR	
	C618	QFN81HJ-473	0.047MF 50V MYLAR	
	C619	QETB1EM-106	10MF 25V ELECTRO	
	C620	QFN81HJ-104	0.1MF 50V MYLAR	
	C622	QCF21HP-223	0.022MF 50V CERAMIC	
	C623	QFN81HJ-333	0.033MF 50V MYLAR	
	C624	QETB1EM-106	10MF 25V ELECTRO	
	C626	QFN81HJ-183	0.018MF 50V MYLAR	
	C627	QFN81HJ-103	0.01MF 50V MYLAR	
	C628	QETB1HM-475	4.7MF 50V ELECTRO	
	C629	QFN81HJ-393	0.039MF 50V MYLAR	
	C630	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C631	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C701	QCBB1HK-101	100PF 50V CERAMIC	
	C703	QCSB1HJ-180	18PF 50V CERAMIC	
	C951	QCZ0202-155	1.5MF 25V CERAMIC	
	C953	QCS21HJ-180	18PF 50V CERAMIC	
	C955	QCF21HP-472	4700PF 50V CERAMIC	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R101	PTH8L07BB2R2N1B	POSITIVE T	HE
	R102	PTH8L07BB2R2N1B	POSITIVE T	HE
	R103	QRD167J-104	100K 1/6W CARBON	
	R104	QRD167J-104	100K 1/6W CARBON	
	R105	QRD167J-222	2.2K 1/6W CARBON	
	R106	QRD167J-222	2.2K 1/6W CARBON	
	R107	QRD161J-221	220 1/6W CARBON	
	R108	QRD161J-221	220 1/6W CARBON	
	R109	QRD161J-221	220 1/6W CARBON	
	R110	QRD161J-221	220 1/6W CARBON	
⚠	R112	QRZ0077-100	10 1/4W FUSIBLE	
	R113	QRD167J-821	820 1/6W CARBON	
	R114	QRD167J-202	2K 1/6W CARBON	
	R115	QRD167J-472	4.7K 1/6W CARBON	
⚠	R116	QRZ0077-560	56 1/4W FUSIBLE	
	R117	QRD167J-202	2K 1/6W CARBON	
	R118	QRD167J-121	120 1/6W CARBON	
	R119	QRD167J-152	1.5K 1/6W CARBON	
	R120	QRD167J-152	1.5K 1/6W CARBON	
	R121	QRD161J-221	220 1/6W CARBON	
	R122	QRD161J-221	220 1/6W CARBON	
	R123	QRD167J-822	8.2K 1/6W CARBON	
	R124	QRD167J-683	68K 1/6W CARBON	
	R125	QRD161J-221	220 1/6W CARBON	
	R126	QRD167J-103	10K 1/6W CARBON	
	R127	QRD167J-103	10K 1/6W CARBON	
	R128	QRD167J-222	2.2K 1/6W CARBON	
	R129	QRD161J-221	220 1/6W CARBON	
	R130	QRD161J-221	220 1/6W CARBON	
	R131	QRD167J-222	2.2K 1/6W CARBON	
	R141	QRD167J-102	1K 1/6W CARBON	
	R201	QRD167J-821	820 1/6W CARBON	
	R202	QRD167J-103	10K 1/6W CARBON	
	R203	QRD167J-105	1M 1/6W CARBON	
	R204	QRD167J-472	4.7K 1/6W CARBON	
	R205	QRD167J-103	10K 1/6W CARBON	
	R206	QRD167J-473	47K 1/6W CARBON	
	R207	QRD161J-221	220 1/6W CARBON	
	R301	QRD167J-560	56 1/6W CARBON	
	R302	QRD167J-330	33 1/6W CARBON	
⚠	R303	QRV144F-1802	18K 1/4W M.FILM	
⚠	R304	QRV144F-1802	18K 1/4W M.FILM	
⚠	R305	QRV144F-1802	18K 1/4W M.FILM	
⚠	R306	QRV144F-1802	18K 1/4W M.FILM	
	R307	QRD167J-271	270 1/6W CARBON	
	R308	QRD167J-182	1.8K 1/6W CARBON	
	R309	QRD167J-560	56 1/6W CARBON	
	R310	QRD167J-271	270 1/6W CARBON	
⚠	R311	QRV144F-1802	18K 1/4W M.FILM	
⚠	R312	QRV144F-1802	18K 1/4W M.FILM	
⚠	R313	QRV144F-1802	18K 1/4W M.FILM	
⚠	R314	QRV144F-1802	18K 1/4W M.FILM	
	R315	QRD167J-182	1.8K 1/6W CARBON	
	R316	QRD167J-271	270 1/6W CARBON	
	R326	QRD167J-182	1.8K 1/6W CARBON	

⚠ :SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R327	QRD167J-182	1.8K 1/6W CARBON	
	R328	QRD167J-182	1.8K 1/6W CARBON	
	R329	QRD167J-182	1.8K 1/6W CARBON	
	R330	QRD167J-123	12K 1/6W CARBON	
	R331	QRD167J-123	12K 1/6W CARBON	
	R332	QRD167J-123	12K 1/6W CARBON	
	R333	QRD167J-123	12K 1/6W CARBON	
	R334	QRD167J-123	12K 1/6W CARBON	
	R335	QRD167J-123	12K 1/6W CARBON	
	R336	QRD167J-272	2.7K 1/6W CARBON	
	R337	QRD167J-272	2.7K 1/6W CARBON	
	R338	QRD167J-472	4.7K 1/6W CARBON	
	R339	QRD167J-472	4.7K 1/6W CARBON	
	R340	QRD167J-331	330 1/6W CARBON	
	R341	QRD167J-331	330 1/6W CARBON	
	R342	QRD167J-273	27K 1/6W CARBON	
	R343	QRD167J-273	27K 1/6W CARBON	
	R344	QRD167J-331	330 1/6W CARBON	
	R345	QRD167J-331	330 1/6W CARBON	
	R346	QRD167J-103	10K 1/6W CARBON	
	R347	QRD167J-103	10K 1/6W CARBON	
	R348	QRD167J-151	150 1/6W CARBON	
	R349	QRD167J-151	150 1/6W CARBON	
	R357	QRD167J-183	18K 1/6W CARBON	
	R358	QRD167J-183	18K 1/6W CARBON	
	R359	QRD167J-473	47K 1/6W CARBON	
	R360	QRD167J-473	47K 1/6W CARBON	
	R361	QRD167J-103	10K 1/6W CARBON	
	R362	QRD167J-103	10K 1/6W CARBON	
	R363	QRD167J-103	10K 1/6W CARBON	
	R364	QRD167J-103	10K 1/6W CARBON	
	R365	QRD167J-562	5.6K 1/6W CARBON	
	R366	QRD167J-562	5.6K 1/6W CARBON	
	R367	QRD167J-271	270 1/6W CARBON	
	R368	QRD167J-271	270 1/6W CARBON	
	R369	QRD167J-680	68 1/6W CARBON	
	R371	QRD167J-390	39 1/6W CARBON	
	R372	QRD167J-390	39 1/6W CARBON	
	R373	QRD167J-271	270 1/6W CARBON	
	R374	QRD167J-271	270 1/6W CARBON	
	R375	QRD167J-680	68 1/6W CARBON	
	R376	QRD167J-102	1K 1/6W CARBON	DBS
	R376	QRD167J-102	1K 1/6W CARBON	E
	R377	QRD167J-102	1K 1/6W CARBON	DBS
	R377	QRD167J-102	1K 1/6W CARBON	E
	R378	QRD167J-151	150 1/6W CARBON	
	R379	QRD167J-151	150 1/6W CARBON	
	R380	QRD167J-121	120 1/6W CARBON	DBS
	R380	QRD167J-121	120 1/6W CARBON	E
	R380	QRD161J-221	220 1/6W CARBON	F
	R381	QRD167J-102	1K 1/6W CARBON	DBS
	R381	QRD167J-102	1K 1/6W CARBON	E
	R381	QRD167J-122	1.2K 1/6W CARBON	F
	R382	QRD167J-155	1.5M 1/6W CARBON	
	R383	QRD167J-560	56 1/6W CARBON	
	R391	QRD167J-103	10K 1/6W CARBON	
	R397	QRD167J-102	1K 1/6W CARBON	F
	R398	QRD167J-102	1K 1/6W CARBON	F
	R399	QRD167J-105	1M 1/6W CARBON	
	R401	QRD167J-682	6.8K 1/6W CARBON	
	R402	QRD167J-332	3.3K 1/6W CARBON	
	R403	QRD167J-103	10K 1/6W CARBON	
	R404	QRD167J-113	11K 1/6W CARBON	
	R405	QRD167J-102	1K 1/6W CARBON	
	R406	QRD167J-102	1K 1/6W CARBON	
	R407	QRD167J-102	1K 1/6W CARBON	
	R411	QRD167J-103	10K 1/6W CARBON	
	R412	QRD167J-103	10K 1/6W CARBON	
	R413	QRD167J-103	10K 1/6W CARBON	
	R414	QRD167J-103	10K 1/6W CARBON	
	R415	QRD167J-103	10K 1/6W CARBON	
	R416	QRD167J-272	2.7K 1/6W CARBON	
	R501	QRD167J-102	1K 1/6W CARBON	
	R502	QRD167J-220	22 1/6W CARBON	
	R503	QRD167J-220	22 1/6W CARBON	
	R504	QRD167J-183	18K 1/6W CARBON	
	R505	QRD167J-183	18K 1/6W CARBON	
	R506	QRD167J-121	120 1/6W CARBON	
	R507	QRD167J-103	10K 1/6W CARBON	
	R508	QRD167J-332	3.3K 1/6W CARBON	
	R509	QRD167J-822	8.2K 1/6W CARBON	
	R510	QRD167J-113	11K 1/6W CARBON	
	R511	QRD167J-104	100K 1/6W CARBON	
	R512	QVPA601-203A	20K VARIABLE	
	R513	QVPA601-203A	20K VARIABLE	
	R514	QRD167J-103	10K 1/6W CARBON	
	R515	QRD167J-910	91 1/6W CARBON	
	R601	QRD167J-472	4.7K 1/6W CARBON	
	R602	QRD167J-472	4.7K 1/6W CARBON	
	R603	QVPA601-203A	20K VARIABLE	

⚠ :SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R604	QVPA601-203A	20K		VARIABLE	
	R605	QRD167J-102	1K	1/6W	CARBON	
	R606	QRD167J-104	100K	1/6W	CARBON	
	R607	QRD167J-103	10K	1/6W	CARBON	
	R608	QRD167J-183	18K	1/6W	CARBON	
	R609	QRD167J-183	18K	1/6W	CARBON	
	R610	QRD167J-224	220K	1/6W	CARBON	
	R611	QRD167J-2R2	2.2	1/6W	CARBON	
	R612	QRD167J-164	160K	1/6W	CARBON	
	R613	QRD167J-134	130K	1/6W	CARBON	
	R614	QRD167J-2R2	2.2	1/6W	CARBON	
	R615	QRD167J-224	220K	1/6W	CARBON	
	R616	QRD167J-333	33K	1/6W	CARBON	
	R617	QRD167J-103	10K	1/6W	CARBON	
	R618	QRD167J-514	510K	1/6W	CARBON	
	R619	QRD167J-2R2	2.2	1/6W	CARBON	
	R620	QRD167J-203	20K	1/6W	CARBON	
	R621	QRD167J-513	51K	1/6W	CARBON	
	R622	QRD167J-124	120K	1/6W	CARBON	
	R623	QRD167J-472	4.7K	1/6W	CARBON	
	R626	QRD167J-203	20K	1/6W	CARBON	
	R627	QRD167J-273	27K	1/6W	CARBON	
	R628	QRD167J-752	7.5K	1/6W	CARBON	
	R629	QRD167J-752	7.5K	1/6W	CARBON	
	R630	QRD167J-333	33K	1/6W	CARBON	
	R631	QRD167J-2R2	2.2	1/6W	CARBON	
	R632	QRD167J-473	47K	1/6W	CARBON	
	R633	QRD167J-513	51K	1/6W	CARBON	
	R634	QRD167J-683	68K	1/6W	CARBON	
	R635	QRD167J-683	68K	1/6W	CARBON	
	R636	QRD167J-684	680K	1/6W	CARBON	
	R637	QRD161J-221	220	1/6W	CARBON	
	R638	QRD167J-823	82K	1/6W	CARBON	
	R701	QRD167J-471	470	1/6W	CARBON	
	RA201	QRB045J-473	47K	1/8W	R.NETWORK	
	VR351	QVAB79C-E53EJ5	5K		VARIABLE	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E306805-010	SPACER	
		E306951-222SS	FL.HOLDER	
		E70306-001	HEAT SINK	
		E70859-001	EARTH PLATE	
		E75464-001	EARTH PLATE	
		SBSG3008Z	SCREW	
		EMW10314-004BS		DBS
		EMW10314-004		E
		EMW10314-004		F
		E3400-431	FELT SPACER	F
	J201	EMV7123-031R	CONNECTOR(31PIN)	
	J301	EMN00TV-214AJ4	2P PIN JACK	
	J302	QMS6302-131	HEADPHONE JACK	
	J401	EMV7123-031	CONNECTOR(31PIN)	
	J601	EMV7144-015	CONNECTOR(15PIN)	
	J701	QMS3501-020J4	MINI JACK	
	L301	EQL4004-1R0	INDUCTOR	
	L701	EQL4004-1R0	INDUCTOR	
	P101	QMCB001-E02HBS	AC SOCKET	DBS
	P101	QMCB001-E02H	AC SOCKET	E
	P101	QMCB001-E02H	AC SOCKET	F
	P501	EMV5109-006A	PLUG ASSY	
	P502	EMV5109-005A	PLUG ASSY	
	X201	ECX0004-194KM	RESONATOR	
	X301	ECX0169-344EYJ1	RESONATOR	
⚠	CP101	ICP-N15	I.C. PROTECTOR	
	FL201	ELU0001-114	FL TUBE	
	FW201	VWS103-214K4K	FLAT WIRE ASSY	
	FW202	VWS108-204K4K	FLAT WIRE	
	FW203	EWR33B-10SST	FLAT WIRE	
	SW201	QSQ1001-E01ZJ7	PUSH SWITCH (1)	
	SW202	QSQ1001-E01ZJ7	PUSH SWITCH (2)	
	SW203	QSQ1001-E01ZJ7	PUSH SWITCH (3)	
	SW204	QSQ1001-E01ZJ7	PUSH SWITCH (4)	
	SW205	QSQ1001-E01ZJ7	PUSH SWITCH (5)	
	SW206	QSQ1001-E01ZJ7	PUSH SWITCH (6)	
	SW207	QSQ1001-E01ZJ7	PUSH SWITCH (7)	
	SW208	QSQ1001-E01ZJ7	PUSH SWITCH (8)	
	SW209	QSQ1001-E01ZJ7	PUSH SWITCH (9)	
	SW210	QSQ1001-E01ZJ7	PUSH SWITCH (10)	
	SW211	QSQ1001-E01ZJ7	PUSH SWITCH (OPEN/CLOSE)	
	SW212	QSQ1001-E01ZJ7	PUSH SWITCH (BACKWARD SCAN)	
	SW213	QSQ1001-E01ZJ7	PUSH SWITCH (FORWARD SCAN)	
	SW214	QSQ1001-E01ZJ7	PUSH SWITCH (BACKWARD SKIP)	
	SW215	QSQ1001-E01ZJ7	PUSH SWITCH (FORWAD SKIP)	
	SW216	QSQ1001-E01ZJ7	PUSH SWITCH (+10)	
	SW217	QSQ1001-E01ZJ7	PUSH SWITCH (PLAY/PAUSE)	
	SW218	QSQ1001-E01ZJ7	PUSH SWITCH (RANDOM)	
	SW219	QSQ1001-E01ZJ7	PUSH SWITCH (REPEAT ALL/1)	
	SW220	QSQ1001-E01ZJ7	PUSH SWITCH (POWER)	
	SW221	QSQ1001-E01ZJ7	PUSH SWITCH (DDRP/ONE TOUCH REC)	
	SW222	QSQ1001-E01ZJ7	PUSH SWITCH (SIDE A/B)	
	SW223	QSQ1001-E01ZJ7	PUSH SWITCH (EDITING)	
	SW224	QSQ1001-E01ZJ7	PUSH SWITCH (PROGRAM)	
	SW225	QSQ1001-E01ZJ7	PUSH SWITCH (CANCEL)	
	SW226	QSQ1001-E01ZJ7	PUSH SWITCH (STOP)	

⚠ : SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Area
	E30580-1922A	INSTRUCTION BOOK	1		EN
	E30580-1921B	INSTRUCTION BOOK	1		EF
	E30580-1920ABS	INSTRUCTION BOOK	1		BS
	E30580-1921B	INSTRUCTION BOOK	1		G
⚠	QMP39F0-183	POWER CORD	1		EN
⚠	QMP39F0-183	POWER CORD	1		EF
⚠	QMP5520-1835BS	POWER CORD	1		BS
⚠	QMP39F0-183	POWER CORD	1		G
	QPGA025-03505B	ENVELOPE	1		BS
	EWP302-011	SIGNAL CORD	1		
	EWP805-001	SIGNAL CORD	1		
	E43486-340A	SAFETY SHEET	1		BS
	BT20060	WARRANTY CARD	1		BS
	BT-20066A	WARRANTY CARD	1		BS
	BT-20134	WARRANTY CARD	1		G
	QPGA025-03505B	ENVELOPE	1		
	RM-SX263U	REMOTE CONTROLLER	1		
	UM-4NJ-2PSA	BATTERY	1		

⚠ : Safety Parts

The Marks for Designated Areas

BS .... the U.K G ..... Germany EF .... Continental Europe
EN .... Scandinavia No mark indicates all area.

Packing Materials and Part Numbers

The Marks for Designated Areas		
BS ····· the U.K	G ····· Germany	EF ····· Continental Europe
EN ····· Scandinavia	No mark indicates all area.